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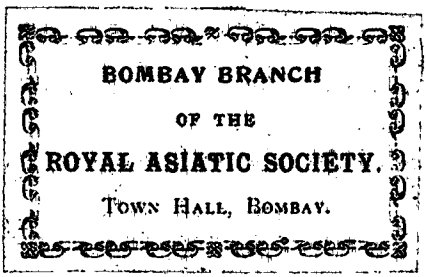


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# ESSAYS

ON

# INDIAN ANTIQUITIES,

ETC.

# ESSAYS

ON

# INDIAN ANTIQUITIES,

HISTORIC, NUMISMATIC, AND PALÆOGRAPHIC,

OF THE LATE

## JAMES PRINSEP, F.R.S.,

SECRETARY TO THE ASIATIC SOCIETY OF BENGAL;

TO WHICH ARE ADDED HIS

# USEFUL TABLES,

ILLUSTRATIVE OF INDIAN HISTORY, CHRONOLOGY, MODERN COINAGES, WEIGHTS, MEASURES, ETC.

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EDITED, WITH NOTES, AND ADDITIONAL MATTER,

BY

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IN TWO VOLUMES.—VOL. II.

WITH NUMEROUS ILLUSTRATIONS.

LONDON:
JOHN MURRAY, ALBEMARLE STREET.
1858.

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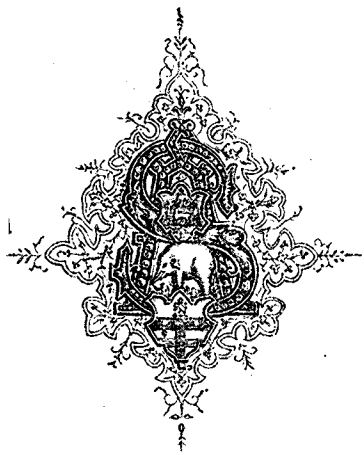

PRINTER, HERTFORD.

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## ERRATA IN VOL. II.

Contents, line 4, for "collection" read "collation."

Page 41, line 9, *for* "Plates xxxvii. and xxxviii.," *read* "Plates xxxviii. and xxxix."
„ 80, „ 10 from the bottom, *for* "explanation of Plate xii.," *read* "explanation of "Plate xxxvii."
„ 109, „ 11 from the bottom, *for* "Ardeslín Bálbiek," *read* "Ardeshír Bábek."
„ 126, „ 6 from the bottom, *cancel* "Fig. 2" (omitted in the new Plate).
„ „ „ 3 from the bottom, *for* "Fig. 1," *read* "Fig. 4."
„ 151, „ 14, *for* "deduced," *read* "cduced."
„ 178, „ 8 from the bottom, *for* "ΔΙΟΛΟΤΟΥ," *read* "ΔΙΟΔΟΤΟΥ."

"*Useful Tables*," page 84.—Table of Imports and Exports of Gold and Bullion.—In heading of *third* column, for "total amount of goods imported into," read "total amount of goods exported from."
„ page 110, note 2, *for* "Marakḳál," *read* "Marakkál."

# CONTENTS.

ART. XVII.—Application of the early Bhilsa Alphabet to the Buddhist group of Coins, 1. Determination of the Lát or Indian Páli Alphabet, 8. Discovery of the name of Antiochus in the text of the Edicts of Asoka, 12. [Prof. H. H. Wilson's collection and illustration of the Páli Edicts from the counterpart Semitic text of Kapurdigiri, 15.] Continuation of remarks on Asoka's Edicts, and discovery of Ptolemy's name therein, 18. [Prof. Wilson's revision of this portion of the Edicts, 21. His objections to the identification of Piyadasi with Asoka, 24. Attempt to reconcile the conflicting dates of the Greek Monarchs mentioned by name in these inscriptions, 24, Review of the facts, 28. Prof. Wilson's Note on the Creed of Asoka, 30. Opinions of other Authors upon the applicability of the title of Priyadasi to Asoka, 30. Prof. Wilson's remarks on the language of the Edicts, 31; and on the comparative antiquity of the use of Sanskrit and Páli in the Buddhist Scriptures, 33.]

ART. XVIII.—*Résumé* of Indian Páli Alphabets, 35. Completion of the Alphabet, and Chronological arrangement of its various offshoots, 39. [Supplementary notice on ditto, 40. Date of earliest use, derivation, etc, 42. Its originality and currency for general purposes, 43. Divergence from the original model, 45. The influence of Sanskrit, 46. Progress of change not dependent on time alone, 48. Influence of Semitic writing upon the Alphabet of India Proper, 49. Indeterminate result, 51. Type Tables of transitions of Indian Alphabets, 52. Selection of modern Alphabets of India, 53.]

ART. XIX.—Examination of the Sáh Inscription from Girnár in Gujarát, 55. Observations thereon, 60. [Prof. Wilson's revised translation of this writing, 67.] Inscription of Skanda Gupta from the same locality, 69. Saurásh tra group of Coins, 69. Ancient Sanskrit Numerals, 70. [Note in continuation of this subject, 80. Dr. Stevenson's discoveries, 81. His idea of a Bactrian derivation of these figures contested, 82. *Résumé* of the present state of the inquiry, 84.] Saurásh tran Coins, 84. [The epoch of the Sáh Kings of Saurásh tra, 86. Referred to the Srí Harsha Era mentioned by Albirúní, 87. Probable dependence of the early Monarchs

of the race upon the Bactrian Greeks, 88. Lassen's view of this question, 88. Major Cunningham's conclusions on the same subject, 89. Objections to the inferences of the latter, 89. Probable form of Government under these Rulers, 90. List of Kings, with their coin dates, 91. Numismatic novelties of this series, 92.] The Gupta Money allied to this Coinage, 94. [Classified Catalogue of the same brought up to the present time, 94. Srí Gupta, 94. Kumára Gupta, 96. Skanda Gupta, 97. Subordinate variety of Saurâshtran Coins, 99.]

Art. XX.—On the application of a new method of Block Printing, with notices of inedited Coins, 102. Coin of Husain Shâh Saffaví, 103. Ditto Muhammad bin Sâm (Ghazní), 105. Ditto Indo-Sassanian, 107. [Classified Index of Indo-Sassanian Coins under the linguistic test of the characters inscribed on their surfaces, 107. Scythic, 108. Scythic and Sanskrit, 109. Scythic, Sanskrit, and Pehlví, 110. Scythic and Pehlví, 112. Pehlví and Sanskrit, 112. Pehlví, Scythic, and Kufic, 115. Unidentified characters and Kufic, 116. Kufic (alone), 117. Unpublished Coins of Talhah bin Táhir, 118. Note on Bráhmanábád Coins, 119. Mansúr bin Jamhúr, 121. A'bdalrahman, 122. Muhammad, 122. A'bdallah, 123. Omar bin A'bdallah, 123.]

Art. XXI.—Additions to Bactrian Numismatics, and determination of Bactrian Alphabet, 125. Definition of the values of the letters, 128. Modifications on previous interpretations consequent upon more advanced and exact revision, 132. Application of the new system to the satisfactory reconcilement of bilingual names and titles, 132. List of these, 134. Description of new Coins, 135. [Substance of Prinsep's discoveries incorporated with the present state of information on these subjects, 143. Review of the Bactrian Alphabet, 144. Its derivation from the Phœnician, and its augmentation and systemization on contact with the Arian language and local Indian Alphabet, 144. Probable date of the early separation of the two cognate styles of writing, 145. Comparatively speedy progress of the Bactrian, 145. Cause of this, 146. Detailed examination of the obscure letters, 147. Parthian or Chaldæo-Pehlvi and associate Sassanian-Pehlvi literal series, 163. Derivative descent of the former from the Phœnician, and its ultimate supersession by the latter, 164. Monumental locality of each, *note*, 164. The influence of the Sassanian style of writing upon the Kufic, 166. Its permanence in the Zend character, 166. Comparative Plate of Bactrian or Arian Alphabets, 166. The Duc de Luynes' contribution of his elaborate series of Phœnician Alphabets, 166. Type Table of Semitic Alphabets, ancient and modern, 168. Kufic, 168. Numismatic Phœnician, 169. Syriac of the 5th century, 169. The model of the Mongol Alphabets, 169. Arian

Nomenclature, 170. The epochal and territorial distribution of the Bactrian Monarchy, 171. The value of Numismatic data, 172. Independent works on the subject, 172. Dynastic Lists—H. H. Wilson's, 173; M. de Bartholomæi's, 174; Major Cunningham's, 175; M. Lassen's, 176. Major Cunningham's list adopted as the basis for the Numismatic Catalogue, 177. Full Catalogue, embracing Prinsep's previously published specimens as well as the novelties discovered since he wrote, 178. Diodotus, 178. Agathocles, 178. Pantaleon, 179. Euthydemus, 180. Demetrius, 181. Heliocles, 182. Antimachus Θεος, 183. Eucratides, 184. Antimachus Νικηφορος, 186. Philoxenes, 187. Artemidorus, 187. Nicias, 188. Apollodotus, 188. Zoilus, 190. Diomedes, 190. Dionysius, 191. Lysias, 191. Lysias and Antialkides, 192. Antialkides, 192. Amyntas, 193. Archebius, 193. Menander, 194. Strato, 196. Agathocleia, wife of Strato, 196. Hippostratus, 198. Telephus, 198. Hermæus, 199. Hermæus and Calliope, 199. Su-Hermæus, 200. Mauas, 200. Kadphises, 202. Kozola Kadaphes, 203. Kodes, 203. Vonones (and Azas), 203. Vonones (and Spalahores), 203. Vonones (and Spalagadames) son of Spalahores, 204. Spalirises and Azas, 204. Spalyrios or Spalagadames (alone), the brother of the king, 205. Spalirises (alone), 205. Azas, 205. Sub-Azas (Aspavarma), 210. Zeionisas, 210. Azilisas, 211. Soter Megas, 213. Kadphises, 213. Gondophares, 215. Abdalgases, 215. Sub-Abdagases Sasan, 216. Arsaces, 217. Pakores, 217. Orthagnes, 217.]

ART. XXI.—Coins and Relics from Bactria, by Mr. H. T. Prinsep, 218. Indo-Bactrian Coins, 223. Buddhist Satrap Coins, 223.

# LIST OF PLATES.


| PLATE | | PAGE |
|---|---|---|
| XXXVII. | —Saurâshtran Coins | 85 |
| XXXVIII. | —Indian Pâlí Alphabet (Consonants) | 41 |
| XXXIX. | — „ „ (Vowels) | 41 |
| | Type Table of the Transitions of the Indian Alphabet | 52 |
| XL. | —Sanskrit Numerals | 72 |
| XL*a*. | —Ancient Indian Numerals | 84 |
| XLI. | —Sanskrit Legends on Indo-Sassanian Coins | 107 |
| XLII. | —New Bactrian Coins | 126 |
| XLIII. | —Bactrian Coins | 135 |
| XI. | —Bactrian and other Alphabets | 166 |
| XI*a*. | —Early Semitic Alphabets | 167 |
| XI*b*. | — „ „ | 167 |
| | Type Table of Semitic Alphabets | 168 |
| | Type Table of Zend and Pehlví Alphabets | 170 |
| XI*c*. | —Monograms on Bactrian Coins | 177 |
| XI*d*. | — „ „ | 177 |
| XLIV. | —Indo-Bactrian Coins | 223 |

| | | | |
|---|---|---|---|
| XLV. | —Symbols on Indian Coins | *(U. T.)* | 67 |
| XLVI. | —Modern Coins of India | *(U. T.)* | 64 |

# NUMISMATIC ESSAYS.

## XVII.—APPLICATION OF THE EARLY BHILSA ALPHABET TO THE BUDDHIST GROUP OF COINS.

[7TH JUNE, 1837.]

Having once become possessed of the master-key of this ancient alphabet, I naturally hastened to apply it to all the doors of knowledge hitherto closed to our access. Foremost among these was the series of coins conjecturally—and, as it now turns out, correctly—designated as the Buddhist series; and of these, the beautiful coin discovered by Lieut. Conolly, at Kanauj, attracted the earliest notice from the very perfect execution and preservation of the legend; [see pl. vii., fig. 1, vol. i., p. 115]. The reading of this coin was now evident at first sight, as 𑀯𑀺𑀧𑁆𑀧𑀤 *Vippa-devasa;* which, converted into its Sanskrit equivalent, will be विप्रदेवस्य *Vipra-devasya*, '(the coin) of Vipra-deva.' On reference to the chronological tables, we find a Vipra in the Magadha line, the tenth in descent from Jarasandha, allotted to

the eleventh century before the Christian era! Without laying claim to any such antiquity, we may at least bespeak for our Vipra-deva a place in the Indu-vansa line of Magadha, and a descent from the individual of the same name in the Pauránic lists.

[I regret to have to disturb this identification, but the new reading of the name on the coin, as *Vishnu-deva*, is distinct and positive! Prinsep himself, it will be seen hereafter, amended his first form of ᑲ = *ph*, to ᑲ, [see pl. xxxvii.] The true letter on the coin is the old equivalent of ष *sh*, which does not seem to have been met with in either the Láṭ character or that of the Western caves, though Dr. Stevenson gives the letter in its present shape among what he terms Satrap characters.—Jour. Bombay Br. As. Soc., July, 1853, pl. xvii.]

Other coins depicted in former plates may, in a similar manner, be read by the new alphabet.

The small bronze coins of Behat (fig. 5, pl. [iv.] xviii., vol. iii. and fig. 13 of pl. [xix.] xxxiv., vol. iv.) have the distinct legend ᘐᑕᒥᕙᓕ in the square form of the same alphabet. The application of the word *mahárájasa* in the genitive, with no trace of a name, might almost incline us to suppose that the title itself was here used as a name, and that it designated the 'Mahraje, king of Awadh,' of the Persian historians, who stands at the head of the third lunar dynasty of Indraprastha, in the 'Rájávalí'!

The only other coin of the group which contains the same title, is the silver decayed Behat coin, seen more perfect in Ventura's specimen (fig. 16 of pl. [xix.] xxxiv., vol. iv.), where may be read indistinctly ᘐᘐᑲᓕᓕᘐᘐᘐᘐᑕᒥᕙ·····+ᒪᒥᓕ *Amapasátasa mahárája . . kunarasa.* [See vol. i., p. 204].

On the bronze Behat coin (figs. 11, 12, of pl. [iv.]

xviii., vol. iii., and 3, 6, 9, of pl. [xix.] xxxiv., vol. iv.), though we have ten examples to compare, the context is not much improved by the acquisition of our new key: the letters are 𑀩𑀲𑀥𑀦𑀓𑀦𑀬𑀥 *basa dhana kanaya dhaya;* (the second letter is more like 𑀪 *bhu.*)

Stacy's supposed Greek legends (figs. 2, 3, of pl. [vii.] xxv., vol. iii.), may be read (as I anticipated), [vol. i., p. 114], invertedly 𑀬𑀕𑀩𑀺𑀚𑀦𑀧𑀼𑀢 *Yagá bijana puta (sa?)*

The larger copper coin, having a standing figure holding a trident (fig. 4, pl. [vii.] xxv., vol. iii.) has, very distinctly, the name of 𑀪𑀕𑀯𑀢 . . . . *Bhagavata cha* (or *sa*). A rája of the name of Bhagavata appears in the Magadha list, about the year 80 B.C.

On some of the circular copper coins, we have fragments of a legend 𑀪𑀫 ··· 𑀯𑀢𑀧𑀲 *Bhámada . . . . vatapasa*, quasi *Bhímadeva tápasya*—but the last word is the only one that can be confided in.

On a similar coin, of which Stacy has a dozen specimens (fig. 47, pl. [xx.] xxxv., vol. iv.) the name of 𑀭𑀫𑀤𑀢𑀲 *Rámadatasa*, 'of Rámadatta,' is bounded by the 'lizard' emblem of Behat.

These are the only two in the precise form of the Lát character—the others are more or less modified.

Another distinct group (that made known first by Mr. Spiers) from Allahábád (pl. [viii.] xxvi., figs. 12-15, vol. iii., p. 436, See Art. vi.), can be partially deciphered by the Lát alphabet. Capt. Cunningham has a fine specimen with the letters 𑀭𑁂𑀤𑀦𑀤𑁂𑀯𑀲 *Rája Dhana-devasya*, 'of Rája Dhana-deva,' a name not discoverable in the catalogue, though purely Sanskrit. On three more of the same family, we find 𑀦𑀯𑀲 *Navasa.* On one it seems

rather *Narasa*, both Nava and Nara being known names. On another *Kunamasa*; and on another, probably,  *mahápati*, 'the great lord.'

The 'bull' coins of this last group are connected in type, and style of legend, with the 'cock and bull' series; on which we have lately read *Satya-mitasa*, *Saya-mitasa*, and *Bijaya-mitasa*; so that we have now a tolerably numerous descending series of coins to be classed together from the circumstance of their symbols, of their genitive termination, and their Pálí dialect and character, as a Buddhist series, when we come again to review what has been done within the last few years in the numismatology of India.

But the most interesting and striking application of the alphabets to coins is certainly that which has been already made (in anticipation, as it were, of my discovery, by Lassen, to the very curious Bactrian coins of Agathocles.

The first announcement of Lassen's reading of this legend was given [vol. i. p. 401]. He had adopted it on the analogies of the Tibetan and Pálí alphabets, both of which are connected with, or immediately derived from, the more ancient character of the Láts. The word read by him, '*rájá*,' on some specimens seems to be spelt *yája*, rather than *lája*, a corruption equally probable, and accordant with the Pálí dialect, in which the *r* is frequently changed into *y*, or omitted altogether. I am, however, inclined to adopt another reading, by supposing the Greek genitive case to have been rendered as literally as possible into the Pálí character; thus  *Agathuklayej* for Αγαθοκλεως: this has the ad-

vantage of leaving the letters on the other side of the device for the title, rájá, of which, indeed, the letter ε is legible.

I am the rather favorable to this view, because, on the corresponding coin of Pantaleon, we likewise find both the second vowel of the Greek represented by the Sanskrit semivowel, and the genitive case imitated: supplying the only letter wanting on Swiney's coin—the initial *p*,—of which there are traces in Masson's drawing, the word ᑲ·ᐱᒍᑯ·ᑕ *Pantelewantá*, is, by the help of our alphabet, clearly made out; the anuswára, which should follow the ᑯ, being placed in the belly of the letter instead of outside; and the *á* being attached to the centre instead of the top of the ᑕ [Pantalevasa.]

The discovery of these two coins with Pálí characters, is of inestimable importance in confirming the antiquity of the alphabet; as, from the style of Agathocles' coins, he must necessarily be placed among the earliest of the Bactrians, that is, at the very period embraced by the reign of Asoka, the Buddhist monarch of Magadha.

On the other hand, the legend throws light on the locality of Agathocles' rule, which, instead of being, as assigned by M. Raoul Rochette, in 'Haute Asie,' must be brought down to the confines, at least, of India proper.

As, however, the opinions of this eminent classical antiquary are entitled to the highest consideration, I take this opportunity of making known to my readers the substance of his learned elucidation of this obscure portion of history, given in a note on two silver coins of Agathocles, belonging to the cabinet of a rich amateur

at Petersburg, published in the 'Journal des Savans,' 1834, p. 335:

'In the imperfect accounts transmitted to us of the troubles occasioned to the Seleucidan kingdom from the invasion of Ptolemy Philadelphus, and of the loss of entire provinces after the reverses of Antiochus II. Theos; the foundation of the Arsacidan kingdom by the defection of the brothers Arsaces and Tiridates is an established point, fixed to the year 256 B.C. But the details of this event, borrowed from Arrian's 'Parthics,' have not yet been determined with sufficient care, as to one important fact in the Bactrian history. From the extracts of various works preserved in Photius, the defection of the Parthians arose from an insult offered to the person of one of these brothers by the Macedonian chief placed by Antiochus II. in charge of the regions of High Asia, and named Phéréclès. The two princes, indignant at such an outrage, are supposed to have revenged themselves with the blood of the satrap, and, supported by the people, to have succeeded in shaking off the Macedonian yoke.

'This short notice from Photius has been corrupted by transcribers in the name of the chief Phéréclès, which modern critics have failed to correct by a passage in the 'Chronographia' of Syncellus, who had equally under his eyes the original of Arrian, and who declares expressly that 'Arsaces and Tiridates (brothers, issue of the ancient king of Persia, Artaxerxes), exercised the authority of satraps in Bactria at the time when Agathocles, the Macedonian, was governor of Persia; the which Agathocles, having attempted to commit on the person of the young Tiridates the assault before alluded to, fell a victim to the vengeance of the brothers, whence resulted the defection of the country of the Parthians, and the birth of the Arsacidan kingdom.' Agathocles is called by Syncellus, *Ἔπαρχος τῆς Περσικῆς*, while Photius calls him (under an erroneous name) *Σατράπην αὐτῆς τῆς χώρας καταστάντα*, appointed by Antiochus Theos; so that no doubt whatever could exist as to their identity, although, until the discovery of the coins, there was no third evidence whence the learned could decide between the two names. The presumption might have been in favor of Agathocles, because among the body-guard of Alexander was found an Antylocus, son of Agathocles, who, by the prevailing custom of his country, would have named his son Agathocles, after his own father.'

M. Raoul Rochette proceeds to identify the Eparch of Persia with Diodotus, or Theodotus, the founder of the

Bactrian independency;—supposing him to have seized the opportunity of striking the blow during the confusion of Antiochus' war with Ptolemy, and while he was on deputation to the distant provinces of the Oxus,—that he was at first chary of placing his own head on his coin, contenting himself with a portrait of Bacchus, and his panther on the reverse, but afterwards emboldened to adopt the full insignia of royalty. Thus, according to our author, a singular shift of authorities took place: Arsaces, the satrap of Parthia, quits that place and sets up for himself in Persia, in consequence of the aggression of Diodotus (or Agathocles), king of Bactria, who had originally been Eparch of Persia,—both satraps becoming kings by this curious *bouleversement*. The non-discovery of Theodotus' medals is certainly in favor of M. Raoul Rochette's argument, but the present fact of a Hindí legend on his coin militates strongly against his kingdom being thrown exclusively to the northward. By allowing it to include Parthia proper, or Seistan, and the provinces of the Indus, this difficulty would be got rid of; but still there will remain the anomaly of these Indian legends being found only on Agathocles, and Pantaleon's coins, while those of Menander, who is known to have possessed more of India proper, have only the Pehlví reverse. Agathocles' rule must have included a sect of Buddhists somewhere, for, besides the letters, we find their peculiar symbol present on many of the 'panther' coins. At any rate, we have certainty of the existence of our alphabet in the third century before Christ, exactly as it exists on our Indian monuments, which is all that on the present occasion it is relevant to insist upon. . . .

[Prinsep then goes on to test the application of this alphabet to other classes of inscriptions, and terminates his remarks with—]

A few words in conclusion regarding the alphabet, of which I have had a fount prepared while this article was setting up for press.

There is a primitive simplicity in the form of every letter, which stamps it at once as the original type whereon the more complicated structure of the Sanskrit has been founded. If carefully analyzed, each member of the alphabet will be found to contain the element of the corresponding member, not only of the Devanágarí, but of the Kanauj, the Pálí, the Tibetan, the Hala Kanara, and of all the derivatives from the Sanskrit stock.

But this is not all: simplification may be carried much farther by due attention to the structure of the alphabet, as it existed even at this early stage, and the genius of its construction, *ab initio*, may in some measure be recognized and appreciated.

First, the aspirated letters appear to have been formed in most cases by doubling the simple characters; thus, ⊕ *chh* is the double of ⊣ *ch*; ○ *ṭh* is the double of ‹ *ṭ*; D *dh* is the half of this; and ⊙ *th* is the same character with a dot as a distinguishing mark: (this may account for the constant interchange of the ‹, ⅄, ○, and ⊙, in the inscriptions). Again: ⊕ *dh* is only the letter ⅃ produced from below—if doubled, it would have been confounded with another letter, the ⊕. The aspirated *p* ⊔ is merely the ⊔ *p* with a slight mark, sometimes put on the outside, either right or left,[1] but I cannot yet affirm

[1] [I have allowed Prinsep's original speculations on the structure of this alphabet to stand uncommented upon; and have reserved for rectification, under his own hand, in the succeeding article, whatever was left imperfect or incomplete in this.]

that this mark may not merely denote a duplication of the letter rather than an aspiration—if, indeed, the terms were not originally equivalent; for we have just seen the doubling of the letter made to denote its aspiration.

The *kh* seems formed from the *g* rather than the *k*: the *gh* and *jh* are missing as in Tibetan, and appear to be supplied by *g* and *chh* respectively: *bh* is anomalous, or it has been formed from the *d* by adding a downward stroke.

Again, there is a remarkable analogy of form in the semi-vowels *r*, *ṛ*, *l*, *y*, , , , , which tends to prove their having been framed on a consistent principle: the first *r* hardly ever occurs in the Dihlí inscription, but it is common in that from Girnár. The *h* is but the reversed: the *ri*, so peculiar to the Sanskrit alphabet, is formed by adding the vowel *i* to the *r*, thus, .

As far as is yet known, there is only one *n*,[1] and one : the nasals and sibilants had not therefore been yet separated into classes; for the written Pálí of 200 years later possesses at least the various *n*'s, though it has but one *s*.

The four vowels, initials, have been discovered, , , , ; *a*, *i*, *e*, *u*. The second seems to be the skeleton of the third, as if denoting the smallest possible vocal sound. Of the medial vowels it is needless to speak, as their agreement in system with the old Nágarí was long since pointed out. The two long vowels *í* and *ú*, are produced by doubling the short symbols. The *visarga* is of doubtful occurrence, but the *anuswára* is constantly employed;

[1] I think the Girnár and Ceylon inscriptions will be found to have the other nasals made by the modification of the primary . There are other letters in these texts not found in the Lâts of this side of India.

and when before *m*, as in 𑀥𑁆𑀫 *dhamma*, it is equivalent to the duplication employed in the more modern Pálí writing. The following, then, is our alphabet, arranged in the ordinary manner.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Gutturals ..... | + | ٦ | ٨ | | *k* | *kh* | *g* | *gh* | *ng* | क ख ग घ ङ |
| Palatals ..... | ძ | ф | ε | . | *ch* | *chh* | *j* | *jh* | *ny* | च छ ज झ ञ |
| Cerebrals ..... | ‹ | ○ | ⊦ | ϭ . | *ṭ* | *ṭh* | *ḍ* | *ḍh* | *ṇ* | ट ठ ड ढ ण |
| Dentals ..... | ٨ | ⊙ | ⊧ | D ⊥ | *t* | *th* | *d* | *dh* | *n* | त थ द ध न |
| Labials ..... | ᑲ | ϭ | ◻ | ⊬ ϐ | *p* | *ph* | *b* | *bh* | *m* | प फ ब भ म |
| Semivowels, etc. | ᒧ | ı | ᒧ | ϭ ᑲ | *y* | *r* | *l* | *v* | *s* | *h* य र ल व स ह |
| Vowels ..... | ϗ | ∴ | ⊳ | L ⊬ | *a* | *i* | *e* | *u* | *rĭ* | अ इ ए उ ऋ |

We might, perhaps, on contemplation of these forms, go yet farther into speculation on their origin. Thus the *g* may be supposed to be formed of the two strokes of the *k*, differently disposed; the *j*, of the two half curves of the *ch* superposed; the two *d*'s[1] are the same letter turned right and left respectively; and this principle, it may be remarked, is to be met with in other scions of the Indian alphabet. Thus, in the Tibetan, the ཟ *z*, a sound unknown to the Sanskrit, is made by inverting the ཇ *j*; the cerebral *ṇ*, by inverting the dental ན *n*; and the cerebral *ṭ*, *ṭh*, by inversion of the dental ཏ ཐ *t th*.

The analogy between the ‹ and ٨ is not so great in this alphabet as in what we have imagined to be its successor, in which the essential part of the (I) *t* is the ‹ placed downwards (^). In the same manner, the connection of the labials, *p* and *b*, is more visible in the old Ceylonese, the Kanauj, and even the Tibetan alphabets;

[1] It is worth observation that the dental *d* of the inscriptions corresponds in form to the modern cerebral, and *vice versâ*.

the ব *b* being merely the ব *p* closed at the top; and in square Pálí ⊔ and ⊏.

Thus, when we come to examine the matter critically, we are insensibly led to the reduction of the written characters to a comparatively small number of elements, as +, ⅆ, ⟨, ⅃, ⊥, ⊔, ⅋, ⅠⅠ, ⅆ and ⅃; besides the vowels ⅄, ⊳, ⊔. Or, perhaps, in lieu of this arrangement, it may be preferable to adopt one element as representative of each of the seven classes of letters. We shall thus come to the very position long ago advanced by Iambulus the traveller.

Iambulus was antecedent, says Dr. Vincent, to Diodorus; and Diodorus was contemporary with Augustus. He made, or pretended to have made, a voyage to Ceylon, and to have lived there seven years. Nine facts mentioned by him as characteristic of the people of that country, though doubted much in former days, have been confirmed by later experience: a tenth fact the learned author of the 'Periplus' was obliged to leave to future inquiry,—namely, "whether the particulars of the alpha bet of Ceylon may not have some allusion to truth: for, he says, 'the characters are originally only seven, but by four varying forms or combinations they become twenty-eight.'"[1]

It would be difficult to describe the conditions of the Indian alphabetical system more accurately than Iambulus has done in his short summary, which proves to be not only true in the general sense of the classification of the letters, but exact as to the origin and formation of the symbols. As regards the discussion of the edict of

[1] Vincent's 'Periplus of the Erythrean Sea.'

Devánampiyatissa, the testimony of Iambulus is invaluable, because it proves that written characters—our written characters—were then in use (notwithstanding the Buddhist books were not made up till two centuries later:) and it establishes the credit of a much vituperated individual, who has been so lightly spoken of, that Wilford endeavours to identify him with Sindbad the Sailor, and other equally marvellous travellers!

[Though not strictly susceptible of classification with numismatic developments, I am anxious to associate with James Prinsep's other contributions to the historical antiquities of India, his most interesting discovery of the names of the early successors of Alexander the Great, on the lapidary monuments of Asoka, the grandson of Chandragupta.]

## DISCOVERY OF THE NAME OF ANTIOCHUS THE GREAT, IN TWO OF THE EDICTS OF ASOKA, KING OF INDIA.

(Read at the Meeting of the Asiatic Society of Bengal, on the 7th March, 1838.)

As long as the study of Indian antiquities confines itself to the illustration of Indian history, it must be confessed that it possesses little attraction for the general student, who is apt to regard the labor expended on the disentanglement of perplexing and contradictory mazes of fiction, as leading only to the substitution of vague and dry probabilities for poetical, albeit extravagant, fable. But the moment any name or event turns up in the course of such speculations, offering a plausible point of connection between the legends of India and the rational histories of Greece or Rome,—a collision between the fortunes of an eastern and a western hero,—forthwith a speedy and spreading interest is excited, which cannot be satisfied until the subject is thoroughly sifted by the examination of all the ancient works, western and eastern, that can throw concurrent light on the matter at issue. Such was the engrossing interest which attended the identification of Sandracottus with Chandragupta, in the days of Sir Wm. Jones: such the ardour with which the Sanskrit was studied, and is still studied, by philologists at home, after it was discovered to bear an intimate relation to the classical languages of ancient Europe. Such, more recently, has

been the curiosity excited, on Turnour's throwing open the hitherto sealed page of the Buddhist historians to the development of Indian monuments and Paurânic records.

The discovery I was myself so fortunate as to make, last year, of the alphabet of the Dihlí Pillar Inscription, led immediately to results of hardly less consideration to the learned world. Dr. Mill regarded these inscriptions as all but certainly demonstrated relics of the classical periods of Indian literature. This slight remainder of doubt has been since removed by the identification of Piyadasi as Asoka, which we also owe to Turnour's successful researches; and, dating from an epoch thus happily achieved, we have since succeeded in tracing the name of the grandson of the same king, Dasaratha, at Gaya, in the same old character; and the names of Nanda and Ailas, and perhaps Vijaya, in the Kalinga caves: while on Bactrian coins we have been rewarded with finding the purely Greek names of Agathocles and Pantaleon, faithfully rendered in the same ancient alphabet of the Hindús.

I have now to bring to the notice of the Society another link of the same chain of discovery, which will, if I do not deceive myself, create a yet stronger degree of general interest in the labours, and of confidence in the deductions, of our antiquarian members than any that has preceded it. I feel it so impossible to keep this highly singular discovery to myself that I risk the imputation (which has been not unjustly cast upon me in the course of my late undigested disclosures), of bringing it forward in a very immature shape, and, perhaps, of hereafter being obliged to retract a portion of what I advance. Yet neither in this, nor in any former communication to the Society, have I to fear any material alteration in their general bearing, though improvements in reading and translation must of course be expected as I become more familiar with characters and dialects unknown for ages past even to the natives themselves, and entirely new to my own study.

A year ago, as the Society will remember, Mr. Wathen kindly sent me a reduced copy of the facsimiles of the inscriptions on a rock at Girnár (Giri-nagara) near Junágarh, in Gujarát, which had been taken on cloth by the Rev. Dr. Wilson, President of the Bombay Literary Society. He also sent a copy to M. Jacquet of Paris, which I dare say before this has been turned to good account.

After completing the reading of the Pillar Inscriptions, my attention was naturally turned to these in the same character from the west of India, but I soon found that the copy sent was not sufficiently well done to be thoroughly made out; and I accordingly requested Mr. Wilson to favour me with the facsimile itself, which, with the most liberal frankness, he immediately sent round under a careful hand by

sea. Meanwhile Lieut. Kittoe had, as you are also aware, made the important discovery of a long series of inscriptions in the same character at a place called Dhaulí, in Katak. These were in so mutilated a state that I almost despaired of being able to sift their contents; and they were put aside, at any rate until a more promising portion of my labour should be accomplished.

I had just groped my way through the Girnár text, which proved to be, like that of the pillars, a series of edicts promulgated by Asoka, but essentially different both in language and in purport. When I took up the Katak inscriptions, of which Lieut. Kittoe had been engaged in making a lithographic copy for my journal, to my surprise and joy I discovered that the greater part of these inscriptions (all, indeed, save the first and last paragraphs, which were enclosed in distinguishing frames), was identical with the inscription at Girnár. And thus, as I had had five copies of the Pillar Inscription to collate together for a correct text, a most extraordinary chance had now thrown before me two copies of the rock edicts to aid me in a similar task! There was, however, one great variance in the parallel; for, while the pillars were almost identical letter for letter, the Girnár and Katak texts turned out to be only so in substance, the language and alphabet having both very notable and characteristic differences.

Having premised thus much in explanation of the manner of my discovery, I must now quit the general subject for a time, to single out the particular passage in the inscriptions which is to form the theme of my present communication.

The second tablet at Girnár is in very good preservation; every letter is legible, and but two or three are in any way dubious. The paragraph at Aswastuma, which I found to correspond therewith, is far from being in so good a state; nevertheless, when the extant letters are interlined with the more perfect Girnár text, they will be seen to confirm the most important passage, while they throw a corroborative evidence upon the remainder, and give a great deal of instruction on the respective idioms in which the two are couched.

The edict relates to the establishment of a system of medical administration throughout the dominions of the supreme sovereign of India, at one of which we may smile in the present day, for it includes both man and beast; but this we know to be in accordance with the fastidious humanity of the Buddhist creed, and we must therefore make due allowance for a state of society and of opinions altogether different from our own. . . . .

TRANSLATION.

"Everywhere within the conquered provinces of Rája Piyadasi, the beloved of the gods, as well as in the parts occupied by the faithful, such as Chola, Pida, Satiyaputra,

and Ketalaputra, even as far as Tambapaṇṇí (Ceylon)—and moreover, within the dominions of Antiochus the Greek (of which Antiochus' generals are the rulers)—everywhere the heaven-beloved Rája Piyadasi's double system of medical aid is established, both medical aid for men, and medical aid for animals: together with medicaments of all sorts, which are suitable for men, and suitable for animals. And wherever there is not (such provision), in all such places they are to be prepared, and to be planted: both root-drugs and herbs, wheresoever there is not (a provision of them) in all such places shall they be deposited and planted.

"And in the public highways wells are to be dug, and trees to be planted, for the accommodation of men and animals."

Many things are deserving of comment in this short edict. . . . But the principal fact which arrests attention in this very curious proclamation, is its allusion to Antiochus the Yona (Sanskrit, *Yavana*) or 'Greek' king. The name occurs four times over, with only one variation in the spelling, where, in lieu of *Antiyako* we have *Antiyoko*, a still nearer approach to the Greek. The final *o* is the regular Páli conversion of the Sanskrit nominative masculine termination *as*, or the Greek *os*. In the Pillar dialect the visarga of the Sanskrit is replaced by the vowel *e*, as we see in the interlined reading, *Antiyake*. Again, the interposition of the semivowel *y* between the two Greek vowels *i* and *o* is exactly what I had occasion to observe in the writing of the words *Agathuklayoj* and *Pantalawanta* for *Αγαθοκλεως* and *Παντaλεοντος* on the coins. All this evidence would of itself bias my choice towards the reading adopted, even were it possible to propose any other; but although I have placed the sentence, exactly transcribed in the Devanágarí character, in the pandit's hand, he could not, without the alteration of very many letters, convert it to any other meaning, however strained. And were there still any doubt at all in my mind, it would be removed by the testimony of the Katak version, which introduces between *Antiyake* and *Yona* the word *náma*,—making the precise sense 'the Yona rája, by name Antiochus.'

[I transcribe so much of the duplicate version of the original, since illustrated and confirmed by the decipherment of the Arian inscription at Kapur di Giri, as in any way affects the historical value of the document, together with Professor Wilson's commentary and revision of Prinsep's translation. The Professor's opening remarks explain the derivation and arrangement of the parallel texts, inserted *in extenso* in the Journal of the Royal Asiatic Society.]

In order to exhibit with as much distinctness as possible the

language of the inscriptions .... I have placed the several inscriptions in parallel lines, in order to bring the words of each in juxta-position as far as was practicable. They accordingly form four lines. The upper line represents Mr. Prinsep's original readings, as published in the Journal of the Asiatic Society of Bengal, vol, vi., p. 228, and above the line, in a smaller character, are inserted his subsequent corrections, as given in a copy of the Journal, corrected by himself, and placed at Mr. Norris's disposal, by his brother, Mr. H. T. Prinsep. Small numerals refer to the lines of our own lithographed copy. This line I have designated G *a*. The second line is the representation of the copy lithographed (in the 'Jour. Roy. As. Soc.,' vol. xii., p. 153), and which I have generally referred to as Mr. Westergaard's copy, as he has the larger share in it. This is marked G *b*. The third line marked D repeats the Dhaulí inscription, as given by Mr. Prinsep. We have not yet been fortunate enough to have had a second and revised transcript, although it is very desirable. The lower line is marked K, as being rendered into Roman letters from the lithographed copy of the Kapur di Giri inscription. The small figures here also refer to the lines of the original. Where blanks occur in either of the inscriptions they are denoted by asterisks (dots are used in this work): where words are wanting for the collation, although there is no blank in the inscription, a line (of dots) supplies their place.

TABLET II.

| | | | | | | |
|---|---|---|---|---|---|---|
| G *a* | [1]Savata | vijitemhi | devánam | piyasa | Piyadasino | rano |
| G *b* | Savata | vijitamhi | devánam | piyasa | Piyadasino | rano |
| D | . avata | vimitamsi | devánam | piyasa | Piyadasine | . . |
| K | *Sa*vatam | vijite | devanam | priyasa | Priyadasisa | raja |

| | | | | | | |
|---|---|---|---|---|---|---|
| G *a* | [2]evamapápavantesu | yathá | Choḍa | Píḍa | Satiyaputo | |
| G *b* | evamapipávantesu | yathá | Choḍá | Páḍá | Satiyaputo | |
| D | . . . . . | | | | | |
| K | . . . . . | | yi | [4]Palaya Sa*ti*ya putra | | |

| | | | | | |
|---|---|---|---|---|---|
| G *a* | Ketalcputo, a | Tamba[3]paṇṇi | Antiyako | yona rája ye | |
| G *b* | Ketalaputá, a | Tambapaní | Antiyako | yona rája ye | |
| D | . . . . . | . . . . | tiyoke náma | yona lája yá | |
| K | cha Keralamputra | Tambapani | Antiyo*ka* ne | yona raja ye | |

| | | | | |
|---|---|---|---|---|
| G *a* | vá pi | —— tasa | Antiyakasa | samino [4]rájáno |
| G *b* | vá pi | —— tasa | Antiyakasá | sámípam rájáno |
| D | va . . | —— . . sa | Antiyokasa | sámantá lajáne |
| K | cha | araṇa tasa | Antiyokasa | samata rajaya |

The portion of the Kapur di Giri inscription, which corresponds with the second Tablet of Girnár and Dhauli, is less imperfect than that which answers to the first

Tablet, and in the few blanks which occur, it admits of being conjecturally completed without any great violence.

There are, however, several omissions as compared with the Girnár sculpture, which are apparently intentional, constituting a variety in the language, though not in the general purport of the inscriptions. The inscriptions correspond also in the chief point of interest, the mention of Antiochus, the Yona Rája.

The inscription commences with the phrase, *Savata vijite*, followed by a short blank, which may be filled up, without much risk of error, by the syllable *mhi*, of the Girnár Tablet—'everywhere in the conquered countries;'—which is followed by the usual designation 'of the beloved of the gods' Piyadasi, the genitive being as before, *Priyadaṣisa:* the word 'countries,' it may be presumed, is understood in all the inscriptions.

We have no equivalent for what follows, which is read by Mr. Prinsep, *evama-pápavantesu*. In Westergaard's copy it might be read, *mahi páchantesu*, but it is, perhaps, only *evam api pachantesu* (for *pratyanteshu*), 'also even in the bordering countries,' not as Prinsep proposes, 'as well as in the parts occupied by the faithful.' Nor have we any equivalent for *Choḍa*, conjectured by Prinsep to be that portion of the south of India which is known as Chola, or Cholamandala, whence our Coromandel.

Instead of *Piḍa*, which requires to be corrected to *Páḍá*, we have *Palaya*, and then *Satiya putra cha Keralamputra Tambapani*, in near approach to *Satiya puto Ketalaputá* and *Tambapani*, words which have been thought intended to designate places in the south of India, but of which the two first, *Palaya* and *Satiya-puto*, are new and unknown. *Kerala* is no doubt a name of Malabar, as Chola is of the opposite coast; but we also find both words, in combination with others, designating countries or people in the north-west, as Kamboja, Yavana, Chola, Murala, Kerala, Śáka. (Gana-Páthra, referring to a *sútra* of Pánini, 4. 1. 175.) Tambapani it has been proposed to identify with Támraparni, or Ceylon, but further research may also remove that to the north. The same authority, giving the *Gaṇa*, or list of words indicated in the *sútra*, 5. 1. 116, explains them to signify tribes of fighting men, and specifies among them Savitrí-putra, which offers some analogy to the *Satiyo-putra* of the inscription. It is much more likely that countries in the north-west, than in the extreme south, of India are intended.

We next come to the important passage in which a Greek name and designation occur. Both the Girnár copies read *Antiyako yona rája:* the Kapur di Giri has *Antiyokane yona rája;* but the two last letters, *ne*, are rather doubtful. It should perhaps be *Antiyoke nama*, as at Dhauli, where we have *tiyoke nama yona lája*. The use of the nominative case, however, offers a syntactical perplexity, for there is not any verb through which to connect Antiochus with the rest of the sentence; and it seems unusual to associate the name of an individual with those of places. Prinsep supplies the defect with 'the dominions of Antiochus the Greek;' but we have no term for 'the dominions,' nor is the noun in the genitive case, as it is in what follows. In this the Kapur di Giri inscription nearly agrees with that of Girnár, and it may be read *ye cha a raṇa tasa Antiyokasa samata rajaya sakato devanam priyasa*, etc., that of Girnár being *ye vá pi tasa Antiyakasa sámipam rájano savata*. Either may be rendered 'and those princes who are near to Antiochus everywhere;' although *rajaya* is an unusual form of the plural of *rája*, being neither Sanskrit nor Páli. The object of prefixing *a* to *rájna* in the word *araṇa*, being equivalent to 'no king,' is not very intelligible, and it can scarcely be doubted that *sukuto* should be *suvutu*, as found both at Girnár and Dhauli. It seems likely that there may be some inaccuracies in this

part, either in the original or the copy. But admitting a concurrent reading, we still want a connecting word, and it is not specified what these neighbours or dependants of Antiochus are to do. We may presume that they are expected to attend to the object of the edict, or they may be comprehended in the list of the *savata vijite*, 'the conquered.'

PROPOSED TRANSLATION.

In all the subjugated (territories) of the King Priyadasi, the beloved of the gods, and also in the bordering countries, as (Choda), Palaya, (or Paraya), Satyaputra, Keralaputra, Tambapani (it is proclaimed), and Antiochus by name, the Yona (or Yavana) Raja, and those princes who are near to (or allied with) that monarch, universally (are apprised) that (two designs have been cherished by Priyadasi: one design) regarding men, and one relating to animals; and whatever herbs are useful to men or useful to animals.

PRINSEP'S TRANSLATION.

'Everywhere within the conquered province of râja Piyadasi, the beloved of the gods, as well as in the parts occupied by the faithful, such as Chola, Pida, Satiyaputra, and Ketalaputra, even as far as Tambapanní (Ceylon); and moreover, within the dominions of Antiochus, the Greek (of which Antiochus' generals are the rulers)—everywhere the heaven-beloved râja Piyadasi's double system of medical aid is established; both medical aid for men, and medical aid for animals; together with the medicaments of all sorts, which are suitable for men, and suitable for animals.'

## CONTINUATION OF REMARKS ON THE EDICTS OF PIYADASI, OR ASOKA, THE BUDDHIST MONARCH OF INDIA, PRESERVED ON THE GIRNA'R ROCK IN THE GUJARA'T PENINSULA, AND ON THE DHAULI' ROCK IN KATAK; WITH THE DISCOVERY OF PTOLEMY'S NAME THEREIN.

(Read at the meeting of the Asiatic Society of Bengal, on the 4th April, 1838).

In continuation of the discovery I had the pleasure of bringing to the notice of the Society at its last meeting, I am now enabled to announce that the edicts in the ancient character from Gujarát do not confine their mention of Greek sovereigns to Antiochus the ally of Asoka, but that they contain an allusion, equally authentic and distinct, to one of the Ptolemies of Egypt! The edict containing this highly curious passage is in a mutilated condition and at the very end of the inscription, which will account for its having hitherto escaped my attention. As I propose to lay before the Society a brief account of the whole of the Girnár inscription, I will do no more than mention the fact at present, reserving the particulars until I come to the actual position of the passage on the stone. . . .

I have already mentioned the fortunate discovery of a duplicate of the Gujarát inscription, at Dhaulí, in Katak.

The divided sentences, or, as I shall for the present venture to call them, the edicts, which are common to Girnár and to Dhaulí, are eleven

in number. From the first to the tenth they keep pace together: the only difference being that while, at Girnár, each is surrounded by an engraved line as a frame; at Dhaulí, the beginning of each edict is marked by a short dash. The regular succession is then interrupted by three interpolations at Girnár; after which, the fourteenth edict of that series is found to correspond with the eleventh or concluding one of the same set at Dhaulí.

The three missing edicts are more than compensated at Dhaulí by the introduction of two others not found at Girnár, one at the end enclosed in a frame, and one on the left hand of the same rock on a larger scale of sculpture; but both of these being of a totally different purport, and being quite unconnected with the rest, I shall postpone for separate consideration.

That the edicts are of different dates is proved by the actual mention of the year of Piyadasi's reign, in which several of them were published. Two of them are dated in the tenth[1] and two in the twelfth year after his *abhiṣek* or consecration, which we learn from Turnour's Páli history did not take place until the fourth year of his succession to the throne of his father, Bindusaro. Only one of the pillar edicts is dated in the twelfth year; the remainder, generally, bearing the date of the twenty-seventh year; and one containing both, as if contradicting, at the later epoch, what had been published fifteen years before. From this evidence we must conclude that the Gujarát and Katak inscriptions have slightly the advantage in antiquity over the Láṭs of Dihlí and Allahábád: but, again, in the order of sequence, we find edicts of the twelfth year preceding those of the tenth; and we learn expressly from the fourteenth edict that the whole were engraven at one time. Their preservation on rocks and pillars therefore must be regarded as resulting from an after order, when some re-arrangement was probably made according to the relative importance of the subjects.

The copy that emanated from the palace must, however, have been modified according to the vernacular idiom of the opposite parts of India to which it was transmitted, for there is a marked and peculiar difference, both in the grammar and in the alphabet of the two texts, which demands a more lengthened examination than I can afford to introduce in this place. I shall, however, presently recur to this subject, and, at least, give the explanation of those new characters which I have been obliged to cut in order to print the Girnár text, and which, in fact, render the alphabet as complete as that of the modern Páli,

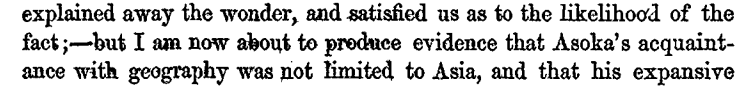
[1] I use these terms as more consonant to our idiom: the correct translation is 'having been consecrated ten and twelve years,' so that the actual period is one year later in our mode of reckoning.

wanting only the two additional sibilants of the Devanágarí, and some of the vowels. . . . .

There is another paragraph at Girnár placed at the bottom of the left hand, which I have numbered as the thirteenth, because it seems naturally to follow the paragraph about conversions; and like the two foregoing it is omitted at Dhaulí. From the mutilated state of the rock in this place it is difficult to put together the context of the entire paragraph; but insulated phrases are intelligible enough, and are much in the same strain as the main inscription, repeating the usual maxim of duty to parents, humanity to animals, and liberality to priests. . . . .

But there is a further passage in this Gujarát edict more calculated to rivet our attention than all that I have briefly alluded to above, or even than the mention of Antiochus in the second or medical edict. Although we might be agreeably surprised at finding the name of a Greek prince of Syria preserved in the proclamation of a Hindú sovereign, there were circumstances of alliance and connection in the histories of the Macedonian provinces and of India, which immediately explained away the wonder, and satisfied us as to the likelihood of the fact;—but I am now about to produce evidence that Asoka's acquaintance with geography was not limited to Asia, and that his expansive benevolence towards living creatures extended, at least in intention, to another quarter of the globe;—that his religious ambition sought to apostolize Egypt;—and that we must hereafter look for traces of the introduction of Buddhism into the fertile regions of the Nile, so prolific of metaphysical discussions from the earliest ages!

The line to which I allude is the fifth from the bottom. Something is lost at its commencement, but the letters extant are, with few exceptions, quite distinct, and as follow:—



. . . *Yona rájá paran cha, tena Chaptáro rájáno, Turamáyo cha, Gongakena cha, Magá cha,*

. . . *idhá para de (se) su cha savata Devánampiyasa dhammánusastin anuvatare yata pánḍati* (? dharmasastin anuvartate yatra pádyate).

'And the Greek king besides, by whom the Chaptá kings, Ptolemaios, and Gongakenos (?) and Magas,'—(here we may supply the connection)—'have been induced to permit that—'[1]

'Both here and in foreign countries, everywhere (the people) follows the doctrine of the religion of Devánampiya wheresoever it reacheth.'

[1] [ In the full translation subsequently given, 'Jour. As. Soc. Ben.' vii., p. 261, the words are, 'And the Greek king besides, by whom the Kings of Egypt, Ptolemaios and Antigonos (?) and Magas' . . .]

The sight of my former friend, the *yona rája* (whom, if he should not turn out to be Antiochus the ally, I shall shortly find another name for), drew my particular attention to what followed; and it was impossible, with this help, not to recognize the name of Ptolemy even in the disguise of Turamayo. The *r* is however doubtful; and I think, on second examination, it may turn out an *l*, which will make the orthography of the name complete. The word *rájáno*, and its adjective *chaptáro*, being both in the plural, made it necessary that other names should follow, which was confirmed by the recurrence of the conjunction *cha*. The next name was evidently imperfect; the syllabic letter, read as *gon*, if turned on one side would be rather *an*, and the next, too short for a *g*, might, by restoring the lost part above, be made into *ti*: I therefore inclined to read this name 𐨨𐨪𐨿𐨫 *Antikono* for *Antigonus*; and, assuming that *chaptáro* was a corruption of *chatwáro*, 'four,' to understand the passage as alluding to a treaty with the four principal divisions of the Alexandrine monarchy, two of which in the time of Antiochus the Great were governed by princes of these names, viz.: Antigonus, in Macedonia, and Ptolemy Euergetes, in Egypt. The fourth name, however, thus remained inexplicable; while on the stone it was even more clear than the others, *Magá*. . . . It seems, therefore, more rational to refer the allusion in our edict to the former period [B.C. 260], and so far modify the theory I have lately adopted[1] on *primâ facie* evidence of the treaty of Asoka with Antiochus the Great, as to transfer it to the original treaty with one of his predecessors, the first or second of the same name, Soter or Theos, of whom the former may have the preference, from his close family connexion with both Ptolemy and Magas. . . . I say nothing of the intermediate name, *Gongakena* or *Antigonus*, because I cannot be certain of its correct spelling. Antigonus Gonatus had much to do with the affairs of Egypt, but he could not well be set down among its kings.

[I again take advantage of Prof. Wilson's most elaborate revision of Prinsep's original translation of this Tablet, prefixing the Romanized variants of the different texts.]

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| K | sanyatam | Antiyoko | nama | yona | raja | parancha | tena |
| G *a* | [illegible] | | | yona | rája | parancha | tena |
| G *b* | [illegible] | | | yona | rája | parancha | tena |
| K | Antiyokena | chaturo | ‖‖ | rajano | Turamara | nama | An- |
| G *a* | „ „ | chaptáro | „ „ | rájáno | Turamáyo | cha | An- |
| G *b* | „ „ | chattáro | „ „ | rájáno | Turamáyo | cha | An- |

[1] [To the effect that Antiochus the Great was the monarch of the name referred to.]

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| K | tikona | nama | Mako | nama | Alikasunari | nama | likhichha | |
| | igono | | | | | | | |
| G *a* | takana | cha | Magá | cha | . . . [9]. | . . . | . . . | . . . |
| G *b* | takana | cha | Magá | cha | . . . . | . . . | . . . | . . . |

The division of the Girnár inscriptions, numbered by Prinsep as thirteen, finds a counterpart at Kapur di Giri; but, unfortunately, it is not of a nature to supply the defects and imperfections of the Girnár tablet. As mentioned by Prinsep, the rock at Girnár is at this part so much mutilated, that it is difficult to put together the context of the entire tablet: portions of the inscription are wanting at either end of each line, especially at the beginning, but the middle portions are tolerably perfect. The rock at Kapur di Giri has not apparently suffered much mutilation, and the inscription is consequently more complete, supplying the words effaced from that at Girnár; but it is not only in this respect that it exceeds in length the Girnár inscription. There are evidently additional passages which the latter does not contain, and which intervene between what are apparently intended for the same passages in both places; on the other hand, there are several obliterations or deficiencies in the Kapur di Giri inscription where that at Girnár is entire. In collating the two, therefore, wide gaps occur without a parallel, partly owing to these respective mutilations,—partly to the additional matter at Kapur di Giri. From place to place, however, concurrent passages do occur, which leave no doubt of the general identity of the inscriptions, as will appear from the collateral copy.

It happens, however, still unfortunately, that neither the additional, nor those which are evidently identical, passages in the Kapur di Giri inscription, are for the major part to be satisfactorily deciphered. The circumstances under which the characters were transcribed sufficiently account for the disappointment. Masson has explained the impossibility of taking a fac-simile of this part of the inscription, and he was obliged after many fruitless efforts to effect his purpose, to be content with carrying off a copy only. But the position of the stone, which prevented a fac-simile from being made, was also obviously unfavourable to the making of a faithful copy; and it is not at all therefore to be wondered at, that the forms of the letters should have assumed deceptive appearances, differing consequently in different parts of the inscription, in words which there is reason to believe the same; and varying from one another in words which from one or two distinct characters are known to be identical, as for instance in *Devanam prya*, in which the latter term is generally legible, and we may therefore infer that *devanam* precedes it; but, without such a guide, it would be impossible to read *devanam*, as it presents itself in a number of different and unusual forms. Masson's copy, however, is more legible than one made by a native employed by M. Court, the use of which has been kindly allowed to the Society by Lassen. In this, very few words can be made out, even by conjecture, and with the assistance of Masson's transcript. It has not, however, been wholly unserviceable.

Prinsep has ventured to propose a continuous translation of the Thirteenth Tablet, although he admits that insulated phrases alone are intelligible. Such is the case in the Kapur di Giri inscription; and it were very unsafe to propose anything like a connected rendering, even of what is perfect, although a few words and phrases are decipherable, and may be compared with similar words and phrases in the Girnár tablet. In most of these passages, however, the reading of the original itself is conjectural only, for it will follow from the sources of imperfection described, that although a transcript has been attempted as above in Roman characters, yet no great reliance is to be placed on the greater part of it, particularly where parallel passages are not found in the Girnár inscription. . . . .

Deficiencies at the end of the seventh and beginning of the eighth line at Girnár, are rather more than adequately filled up at Kapur di Giri, and some of the additional matter is important. The name and designation, *Antiyoka nama yona Rája*, are given distinctly: why he is introduced does not very well appear, but we might venture to connect it with what precedes, and to interpret and fill up the passages thus: 'He who had obtained the alliance of men—he has been received as the friend of (me) Devanampriya:' we have for this conjectural rendering, *Devanam priyasa;* then some unreadable letters, *sampapi* (for *samaprápi*) *yo janasa* (*su*) *sanyatam*. At Girnár we have only *yona Raja*, but no name, no Antiochus, nor any circumstance relating to him. Both inscriptions next read *parancha*, 'and afterwards;' the Girnar has then *tena*, 'by him,' which, as no name was specified, Prinsep necessarily interpreted, 'by whom' (rather 'by him,' the Greek king). In the Kapur di Giri tablet, *tena* refers of course to Antiochus; but, not to leave any doubt on this score, the inscription repeats the name, and gives us *tena Antiyokena*, 'by that Antiochus;' thus furnishing a very important illustration of the Girnár tablet. What then was done by him? by that Antiochus? this is not to be made out very distinctly; but, connected with what follows, it may be conjectured to imply that four other Greek princes were brought under subjection by him. There can be no doubt that the numeral which Prinsep read *chaptáro* is, properly, *chattáro*. There is no *p* in the Kapur di Giri inscription; it is, clearly, *chataro*, with the usual disregard of correct orthography and identification of long and short vowels. In the Girnár inscription the form is like *pt*, no doubt; but this combination, as already observed, treating of Tablet XII., is so utterly repugnant to the most characteristic feature of Páli, that it cannot be allowed; and in this case, if the original word intended to be the Sanskrit numeral *chatwára*, the *p* would be gratuitously inserted. The only admissible reading is *chattáro*, the regular Páli form of the Sanskrit *chatwára*: four indistinct marks follow the numeral in each inscription, being probably intended for figures equivalent to four. We then have the several names of the four princes remarkably distinct, and it luckily happens that M. Court's copy is also very legible in this passage, and entirely confirms Masson's readings. The passage runs thus: *Turamara nama, Antikona nama, Mako nama, Alikasunari nama.* At Girnár the last name is wanting, there being some letters obliterated. We have also some variation in the reading, but not material, the names being there, *Turamáyo cha, Antakana cha, Magá cha.* The two inscriptions give us, no doubt, the names of four Greek princes, of whom Ptolemy, Antigonus, and Magas may be readily recognised, although, how they come into juxta-position with Antiochus on the one hand, or Alexander on the other, is only to be explained by the supposition that, although these names had from their celebrity reached the west of India, the history of the persons so named was vaguely and incorrectly known.

We shall, however, recur to the subject: at present we are only concerned with the purport of the inscription, which is unfortunately by no means distinct. We have the order, by that Antiochus four Yavana kings, were:—what? neither inscription enables us to answer: the Girnár inscription being in fact here mutilated. Prinsep, in his introductory remarks, supplying the connection conjecturally, fills up the blank by reading, 'And the Greek king besides, by whom the four kings have been induced to permit,' but there is nothing to warrant such a translation; and in the actual rendering of the passage the latter clause is omitted: we there have, 'and the Greek king, besides, by whom the kings of Egypt, Ptolemaios, Antigonos (?), and Magas, etc.', and then follows a blank. The Kapur di Giri inscription, although entire, presents characters of undetermined value, and probable inaccuracies. The

first term, *likhichha thana*, is very doubtful; the next appears to be *jayavata*, which might be rendered 'victorious,' in the instrumental case, agreeing with *Antiyokena: amansa* is doubtful, both as to reading and sense; *ye asa miti puna rajanti* might be rendered 'they who (the kings) become his friends, again shine (or enjoy dominion).' We may also render *eva hi yona kati yasha*, 'such, indeed, is the Yavana become, of whom;' there then follow some indistinct characters, and the phrase seems to terminate with *miti hi kite*, 'friendship or alliance has been made.' This I admit is very conjectural, and a corrected copy or a better founded interpretation of the original may shew it to be wholly erroneous; but, in the present state of the inscriptions we may hazard the conjecture that the purport of the whole passage may be, that the four princes, after being overthrown by Antiochus, had been reconciled to him, and that an alliance had then been formed between him and the Indian prince Devapriya. There is nothing whatever to justify the supposition that Devapriya had attempted to make converts of the Greek princes, or to disseminate the doctrines and practices of Buddhism in their dominions.

The state of this transcript of the Kapur di Giri inscription is very far from satisfactory, while, from the names it records, it appears to be of great historical value. It would be very desirable to have a fac-simile carefully taken; and, as the part of the country in which it is situated is now within the reach of British influence, it might be possible, perhaps, without much difficulty, to have such a copy. In the 'Jour. As. Soc. Beng.', Feb. 1848, Capt. Cunningham mentions, in his Diary, his having visited the spot, and taken a copy of the most legible portion of the inscription;[1] he adds, however, that a proper copy could only be made by levelling the ground and building up platforms, and by white-washing the surface of the rock to bring out the sunken letters, a work of time, but which would well repay the labour.

[Prof. Wilson, it will be seen, promised to recur to the subject of the identities of the kings named in the inscription; he does so—while contesting the identity of Piyadasi and Asoka—to the following effect]:—

So that neither of these epithets (*Priyadarsana*, or *Su-darsana*), is exclusively restricted to Asoka, even if they were ever applied to him.

That they were so applied is rendered doubtful by chronological difficulties, of which it is not easy to dispose: Piyadasi appears to have lived, either at the same time with, or subsequent to, Antiochus. Could this have been the case if he was Asoka? For the determination of this question, we must investigate the date at which the two princes flourished, as far as the materials which are available will permit.

The first point to be adjusted is, which Antiochus is referred to. There are several of the name amongst the kings of the Seleucidan dynasty, whose sway, commencing in Syria, extended at various times, in the early periods of their history, through Persia to the confines of India. Of these, the two first, Antiochus Soter and Antiochus Theos, were too much taken up with occurrences in Greece and in the

[1] [A lithograph, by T. Black, of Calcutta is now before me, which purports to give, under Mr. J. W. Laidlay's authority, the 'Inscription at Shâh-baz-garhi, copied by Captain A. Cunningham.' The facsimile is defective and erroneous to a marked degree. As it does not include the thirteenth tablet, it affords no aid in determining the probable orthography of the doubtful names. Major Cunningham's own version of the fifth name is quoted at the foot of p. 26.]

west of Asia, to maintain any intimate connexion with India, and it is not until the time of Antiochus the Great, the fifth Seleucidan monarch, that we have any positive indication of an intercourse between India and Syria. It is recorded of this prince that he invaded India, and formed an alliance with its sovereign, named by the Greek writers, Sophagasenas, in the first member of which it requires the etymological courage of a Wilford to discover Asoka. The late Augustus Schlegel conjectured the Greek name to represent the Sanskrit, Saubhágya sena, he whose army is attended by prosperity; but we have no such prince in Hindú tradition, and it could scarcely have been a synonyme of *Asoka*, the literal sense of which is, he who has no sorrow. Neither is Sophagasenas more like Piyadasi, and so far therefore we derive no assistance as to the identification of Antiochus. Still, with reference to the facts, and to the allusion to his victorious progress, which Tablet XIII. seems to contain, we can scarcely doubt that he was the person intended, and that the Antiochus of the inscription is Antiochus the Great, who ascended the throne, B.C. 223, and was killed, B.C. 187. The date of his eastern expedition is from B.C. 212 to B.C. 205.

There is, however, an obvious difficulty in the way of the identification from the names of the princes which are found in connexion with that of Antiochus, and which the thirteenth Tablet appears to recapitulate as those of contemporary princes, —subjugated, if the conjectural interpretation be correct, by Antiochus. With respect to one of them, Ptolemy, this is allowable, for Antiochus the Great engaged in war with Ptolemy Philopator, the fourth king of Egypt, with various success, and concluded peace with him before he undertook his expedition to Bactria and India. He therefore was contemporary with Antiochus the Great. It is, however, to be recollected that Ptolemy Philopator was preceded by three other princes of the same name, Ptolemy Soter, Ptolemy Philadelphus, and Ptolemy Euergetes,—extending through a period of rather more than a century, or from B.C. 323 to B.C. 221. These princes were frequently engaged in hostilities with the Seleucidan kings of Syria, and we cannot therefore positively determine which of them is referred to in the inscription. The long continuance of the same name, however, among the kings of Egypt, as it was retained until the Roman conquest, no doubt made it familiar throughout the East, and we need not be surprised to find it at Kapur di Giri or Girnar.

The same circumstance will not account for the insertion of the name of Mako, probably Magas, for although there was such a prince, he was far removed from India, and of no particular celebrity. Magas was made ruler of Cyrene by his father-in-law, Ptolemy Soter, the first Greek king of Egypt, about B.C. 308. He had a long reign of fifty years, to B.C. 258. He was not, therefore, contemporary with Antiochus the Great, dying thirty-five years before that prince's accession. He was connected with Antiochus Soter, having married his daughter, and entered into an alliance with him against Ptolemy Philadelphus,—and this association with the names of Antiochus and Ptolemy, generally but not accurately known, may have led to his being enumerated with the two other princes of the same designation, Ptolemy Philopator, and Antiochus the Great. There was a Magas also, the brother of Philopator, but he is of no historical note, and was put to death by his brother in the beginning of his reign. The allusion is, therefore, no doubt to the Magas of Cyrene.

It is impossible to explain the juxta-position of the other two names, Antigonus and Alexander, upon any principle of chronological computation, although we can easily comprehend how the names were familiarly known. That of Alexander the Great must of course have left a durable impression, but he is antecedent to any of his generals who made themselves kings after his death. It is very unlikely that his

son Alexander, who was not born till after his death, and from the age of three years was brought up in Macedonia, where he was murdered when only twelve years old, should be the person intended, and a greater probability would attach to an Alexander who was Satrap of Persia in the beginning of the reign of Antiochus the Great, and rebelled against him. He was defeated and killed, B.C. 223. So far therefore we have an Alexander contemporary with Antiochus, if that be thought essential; but it seems more likely that here, as in the case of Magas, the concurrence of names is no evidence of synchronism, and arises from the name being familiarly known without any exact knowledge of the persons by whom they were borne.

Such seems to be the case also with respect to Antigonus. The most celebrated of the name, Alexander's general who succeeded to the sovereignty of Phrygia and Lycia, extended his authority to the East by the defeat and death of Eumenes, and his name may thus have become known in India, although the scene of his victories over his rival was somewhat remote from the frontier, or in Persia and Media. The latter portions of his career were confined to Asia Minor and Greece, and he was killed B.C. 301. He was contemporary with the first Ptolemy, but not with Antiochus, having been killed twenty years before the accession of Antiochus Soter. We have another Antigonus, the grandson of the preceding, who was contemporary with Antiochus Soter, but his life was spent in Macedonia and Greece, and it is not likely therefore that any thing should have been known of him in India. It can only be the first Antigonus whose designation reached an Indian prince, and the mention of him in conjunction with Ptolemy, Antiochus, Magas, and Alexander, shows clearly that the chronology of the inscription was utterly at fault, if it intended to assign a contemporary existence to princes who were scattered through, at least, an interval of a century. We must look, therefore, not to dates, but to the notoriety of the names, and the probability of their having become known in India, for the identification of the persons intended. Under this view, I should refer Alexander to Alexander the Great, Antigonus to his successor, Magas to the son-in-law of Ptolemy Philadelphus, Ptolemy to either or all of the four first princes of Egypt, and Antiochus to the only one of the number who we know from classical record did visit India, and who, from the purport of the inscriptions, we may infer was known there personally,—Antiochus the Great.[1] In this case we obtain for

[1] [I append Major Cunningham's criticism on these arguments.] 'The minor difficulties of chronology, which form Prof. Wilson's last objection ('Jour. Roy. As. Soc.,' vol. xii., p. 244), are easily disposed of, for they seem to me to have arisen solely from the erroneous assumption that Priyadarsi must have been a contemporary of Antiochus the Great. In the Girnár and Kapur di Giri rock inscriptions, King Priyadarsi mentions the names of five Greek princes who were contemporary with himself. Of these four have been read with certainty—Antiochus, Ptolemy, Antigonus, and Magas; and the fifth has been conjectured to be Alexander. James Prinsep, who first read these names, assigned them to the following princes:—Antiochus II., Theos of Syria, B.C. 265—247; Ptolemy II., Philadelphus of Egypt, B.C. 285—246; Antigonus, Gonatus of Macedon, B.C. 276—243; Magas of Cyrene, B.C. 258; and with these identifications the learned of Europe have generally agreed. 'The fifth name has been read by Mr. Norris as Alexander; and if this reading is correct, we may identify this Prince with Alexander II. of Epeiros, who reigned from B.C. 272–254; but the two copies of this name, published by Mr Norris, from facsimiles by Masson and Court, appear to me to read Ali bha Sunari, which may be intended for Ariobarzanes III., King of Pontus, who reigned from B.C. 266–240. But in either case the date of Priyadarsi inscription will be about B.C. 260–258, shortly preceding the death of Magas.'—'Bhilsa Topes,' p. 111. 'To some it may seem difficult to understand how any relations should exist between the Indian Asoka and the Greek princes of Europe and Africa; but to me it appears natural

the date of the inscription some period subsequent to B.C. 205, at which it seems very unlikely that Asoka was living.

To obviate the chronological difficulty it has been suggested that the Antiochus alluded to is not Antiochus Magnus, but Antiochus Theos, who reigned from B.C. 261 to B.C. 246, and who would therefore be contemporary with Asoka. This is no doubt true, but as intimated above, historical events are opposed to the maintenance of any friendly connexion between the princes of India and Syria during the reign of Antiochus Theos. At its very commencement he was involved in hostilities with the King of Egypt; the war continued during the greater portion of his reign, and amongst its results, were the neglect and loss of the Eastern provinces. Media and Bactria became independent principalities; and their geographical, as well as political position must have completely intercepted all communication between India and Western Asia. It is very unlikely that an Indian sovereign would have promulgated any alliance with the enemy of his immediate neighbours, and we should rather look for the names of Arsaces or Theodotus in his edicts, than that of Antiochus Theos. We cannot, therefore, upon historical grounds admit the identity of the Antiochus of the inscriptions with Antiochus Theos, any more than we can recognise an alliance between Asoka and Antiochus Magnus, as chronologically probable upon such premises as we derive from classical Pauranic, and partly Buddhist data.

If, indeed, we are guided solely by the latter, we shall render the synchronism of the two princes still more impossible. According to the Dípawanso and Mahá-wanso, Dharmasoka was inaugurated two hundred and eighteen years after the death of Buddha; his inauguration took place four years after his accession, and we place the latter therefore two hundred and thirteen years after the Nirván of Gautama. The date of this event was B.C. 543, and 543—214=B.C. 329; and Asoka, therefore, ascended the throne, according to the Buddhists, before the invasion, not of Antiochus, but of Alexander the Great. This, however, must be wrong, and Mr. Turnour acknowledges that the chronology of the Buddhist chronicles is here at fault; he makes the error amount to about sixty years, and conceives that it was an intentional vitiation of the chronology: with what purpose he has not explained. It is enough for us to determine that Asoka cannot have been the cotemporary of Antiochus the Great, according to the chronology either of Brahman or Buddhist. That Piyadasi was the cotemporary of Antiochus, or even posterior to him, is evident from the inscription, and therefore Piyadasi and Asoka are not one and the same person. That Asoka became a convert to Buddhism after commencing his reign as a sanguinary tyrant, may or may not be true: we have only the assertions of the Buddhists for the fact. But allowing it to be true, if Asoka was not the author of the edicts in question, no inference of their Buddhist character can be drawn from his conversion to the faith of Buddha, and the uncertain evidence afforded by their language is not rendered less equivocal by any positive proof of their having been promulgated by a prince who was a zealous patron of the doctrines of Sákyasinha.

But who then was Piyadasi, the beloved of the gods? This is a question not easily answered. The term is evidently an epithet applied to more than one individual, and not the proper designation of any one person exclusively. We have

and obvious. Asoka's kingdom on the west was bounded by that of Antiochus; his father, Bindusára, had received missions from Antiochus, Soter, and Ptolemy Philadelphus; and as Asoka was 45 years of age when he was inaugurated, in B.C. 259, he might have conversed with both of the Greek ambassadors, Daimachos and Dionysios.'—112.

no such name in any of the Brahmanical traditions, and find it in the Buddhist, as indicating a sovereign prince, to whom it could not have been applied consistently with chronological data, upon the authority of a work of the fourth century of our era. That any uncertainty with regard to its appropriation should exist, seems very incompatible with the extent of the dominions ruled over by the prince of the inscriptions, as far as we are to infer, from the sites in which they are found, as Gujarát, Katak, Behar, Dihlí, and the Panjab. A monarch, to whom all India, except the extreme south, was subject, must surely have left some more positive trace of his existence than a mere epithet, complimentary to his good looks, and shared with many others of equally pleasing appearance. That such almost universal sovereignty in India was ever exercised by a single prince is extremely improbable, and it is undeniable, from the evidence of the inscriptions themselves, that they have not been sculptured, in the situations in which they occur, cotemporaneously with the year of any individual reign. Thus, in all the rock inscriptions, the third and fourth edicts are said to be issued in the twelfth year of Piyadasi's inauguration; the fifth and eighth, in the tenth year: the two later edicts, in point of time, taking precedence of the two earlier, in the order of inscription—an utter impossibility. We can only infer, therefore, that they were simultaneously inscribed. Mr. Prinsep states, that it is so specified in the Fourteenth Tablet, but I am unable to understand the passage in that sense. That it was the case, however, is obvious, from the inverted order of the dates, and from the uniform appearance of the inscriptions. The whole must have been cut, therefore, at some subsequent period to the latest of the dates. How long subsequent, is another question of impossible solution; but it is very improbable that the rocks of Gujarát, Dhauli, and Kapur di Giri, were all engraved at the same time. The operation must have been spread over some years, and it is not likely that it was subsequent to the date of their reputed author, if he ever had a real existence. It seems, however, not improbable, that the rulers of the several countries, or influential religious persons, adopted the shadow of a name, to give authority to the promulgation of edicts intended to reform the immoral practices of the people, and for that purpose repeated documents which had acquired popular celebrity in some particular locality not yet ascertained.

From these [and other] considerations, I have been compelled to withhold my unqualified assent to the confident opinions that have been entertained respecting the object and origin of the inscriptions. Without denying the possibility of their being intended to disseminate Buddhism, and their emanating from the Maurya prince Asoka, there are difficulties in the way of both conclusions, which, to say the least, render such an attribution extremely uncertain.

[ I have allowed Prof. Wilson to state his doubts and difficulties at greater length than I should have conceded to him, had I not been prepared to contest his leading inferences.

I do not, however, design to enter upon any critical examination of the minor evidences and coincidences the Professor has sought to reconcile; as, with a doubtful text, an avowedly imperfect interpretation, with one of the historical names only partially legible and dates conflicting *inter se*, the most elaborate solution could not but fail to prove unsatisfactory. And further,

I am disposed to accept, with added force, all that portion of the Professor's deductions which implies crass ignorance of Syrian and Grecian events on the part of the compilers of Piyadasi's Edicts. Still, there are some obvious facts upon which we may fairly speculate. It is clear that Antiochus, as spoken of in these inscriptions, was, at the moment of their composition, the most prominent personage of the western world within the ken of the Indian court. That Antiochus Θεός is the sovereign alluded to many miscellaneous items of evidence, now available, tend to show. These points being admitted, it would seem to follow, from the expressions made use of in the second tablet, that the defection of the Bactrians under Diodotus—assigned to 250, B.C.—had not, up to this time, developed itself. The allusion to the four kings it is less easy to explain, nor is it obvious why that particular number should have been selected. As the text does not enable us to say what position these kings held in reference to the more influential Antiochus, speculations on this head must, of course, be next to futile. Certainly the satisfactory explanation of the coincidences of the given names, with any combination of the then-existing monarchical distributions, remains to be accomplished: whether the record aimed at a mere vague selection of the more generally known Greek names to complete the list, or whether, as is just possible, there was some indefinite remembrance of the quadruple alliance (311, B.C.), of which Seleucus was the subordinate confederate and local representative during his Indian expedition, and of the eastern rights and titles of which Antiochus became the apparent heritor, it would be rash to assert; but it is clear that the designations of two of the parties to this league open the list, and whether MAGAS represents the Cyrenian, or some other of the name, or stands as the curtailed corruption of that of Lysimachus, while *Ali Kasunari*[1] may

[1] Masson's eye-copy of the Kapur di Giri inscription may be variously read, Ali Kasanari, Ali Kasadari, or, doubtfully, Ali Kshasanari. The initial letter is very uncertain, and might almost be read as a *G*. The third letter differs materially from the ordinary *Bh's*, and must either be the simple *K* of Court's copy or some compound of *Sh*, under Masson's representation.

chance to do duty for Alexander, Cassander, or some living potentate whose cognomen had but lately reached Indian ears, we need scarcely stop to inquire.

In his first paper[1] on the Girnár, Dhaulí, and Kapur di Giri edicts, Prof. Wilson expressed an opinion that, 'although the tenor of the inscriptions was not incompatible with a leaning to the religion of Buddha, yet the total absence of any reference to the peculiarities of the Buddhist system, left some uncertainty with regard to the actual creed of the rája, and his intimate connection with the followers of Buddha.'

In a subsequent article on the Bhabra inscription[2] the Professor frankly admits that, 'although the text is not without its difficulties, yet there is enough sufficiently indisputable to establish the fact, that Priyadasi, whoever he may have been, was a follower of Buddha.'[3] Our leading Orientalist, it will be seen, still hesitates, therefore, to admit the identity of Priyadasi and Asoka. With all possible deference to so high an authority, I am bound to avow that I see no difficulty whatever in the concession. We may stop

[1] 'Jour. Roy. As. Soc.', vol. xii. (1849), cited nearly in extenso above.

[2] 'Jour. Roy. As. Soc.', vol. xvii. (1856), p. 357. *Supra cit.*

[3] The inscription opens thus: 'Priyadasi, the king, to the venerable assembly of Mâgadha, commands the infliction of little pain, and indulgence to animals. It is verily known, I proclaim, to what extent my respect and favor (are placed) in Buddha, in the law, and in the assembly. Whatsoever (words) have been spoken by the divine Buddha, they have been well said,' etc.—See also 'Jour. As. Soc. Beng.' 1840.—Lassen 'Indische Alt.' ii. 221. [I annex to these notes on the Bhabra inscriptions some interesting speculations of Bournouf's, as to the nature of the monument itself, and the probable purpose for which it was shaped.] 'C'est, ainsi que l' a bien vu M. Kittoe, une missive adressée par le roi Piyadasi à l'Assemblée des Religieux réunis à Pâtaliputra, capitale du Magadha, pour la suppression des schismes qui s'étaient élevés parmi les Religieux buddhistes, assemblée qui, selon le Mahâvaṁsa, eut lieu la dix-septième année du règne d'Açôka. La forme est en elle-même très-remarquable. L'inscription, en effet, n'est pas gravée comme les autres monuments de ce genre qui portent le nom de Piyadasi, soit sur une colonne monolithe, soit sur la surface d'un rocher adhérant aux flancs d'une montagne. Elle est écrite, et très-soigneusement, sur un bloc détaché de granit qui n'est ni d'un volume ni d'un poids considérable, n'ayant que deux pieds Anglais sur deux de ses dimensions, et un pied et demi sur la troisième. Ce bloc, de forme irrégulière, peut être aisément transporté. . . . C'est une lettre que le roi a fait graver sur la pierre avec l'intention avouée d'assurer la durée de cette expression si claire de son orthodoxie, peut-être aussi avec celle de faire transporter facilement et sûrement cette singulière missive dans les diverses parties de l'Inde où se trouvaient des Religieux . . . l'inscription est écrite dans l'ancien dialecte Mâgadhî.'—'Le Lotus de la bonne Loi,' p. 727, 728.

short of absolute and definite proof, that Asoka enunciated his edicts under the designation of Priyadasi, 'the beloved of the gods;' but all legitimate induction tends to justify the association, which is contested by no other inquirer.[1] To assert that the edicts themselves do not accord in spirit with the exclusive intolerance attributed to Asoka by his Buddhist successors, is merely to show that they misrepresented his aims and desires in this respect, as they palpably misinterpreted and altered many of the original tenets of the religion itself.

As a fitting conclusion to these commentaries, I append Prof. Wilson's remarks on the language of the edicts:—]

The language itself is a kind of Páli, offering for the greater portion of the words forms analogous to those which are modelled by the rules of the Páli grammar still in use. There are, however, many differences, some of which arise from a closer adherence to Sanskrit, others from possible local peculiarities, indicating a yet unsettled state of the language. It is observed by Mr. Prinsep, when speaking of the Lât inscriptions, "The language differs from every existing written idiom, and is as it were intermediate between the Sanskrit and the Páli." The nouns and particles in general follow the Páli structure; the verbs are more frequently nearer to the Sanskrit forms; but in neither, any more than in grammatical Páli, is there any great dissimilarity from Sanskrit. It is curious that the Kapur di Giri inscription departs less from the Sanskrit than the others, retaining some compound consonants, as *pr* in priya instead of Piya; and having the representatives of the three sibilants of the Devanágarí alphabet, while the others, as in Páli, have but one sibilant: on the other hand, the Kapur di Giri inscription omits the vowels to a much greater extent, and rarely distinguishes between the long and short vowels, peculiarities perhaps not unconnected with the Semitic character of its alphabet.

The exact determination of the differences and agreements of the inscriptions with Páli on the one hand, and Sanskrit on the other, would require a laborious analysis of the whole, and would be scarcely worth the pains, as the differences from either would, no doubt, prove to be comparatively few and unimportant, and we may be content to consider the language as Páli, not yet perfected in its grammatical structure, and deviating in no important respect from Sanskrit. Páli is the language of the writings of the Buddhists of Ava, Siam, and Ceylon; therefore it is concluded it was the language of the Buddhists of Upper India, when the inscriptions were engraved, and consequently they are of Buddhist origin. This, however, admits of question; for although the Buddhist authorities assert that Sakya Sinha and his successors taught in Páli, and that a Páli grammar was compiled in his day; yet, on

[1] Turnour, 'Jour. As. Soc. Beng.,' vi. 1050, and vii. 930; Lassen, ii. 271; Burnouf, i. 633, ii. 778; Cunningham, 'Bhilsa Topes,' 108; Sykes, 'Jour. Roy. As. Soc.,' vi. 460; Müller, 'Buddhism and Buddhist Pilgrims,' p. 23.

the other hand they affirm, that the doctrines of Buddha were long taught orally only, and were not committed to writing for four centuries after his death, or until B.C. 153, a date, no doubt, subsequent to that of the inscriptions. In fact, the principal authorities of the Cingalese Buddhists appear to have existed in Cingalese, and to have been translated into Pálí only in the fifth century after Christ.

According to M. Burnouf and Mr. Hodgson, the earliest Buddhist writings were not Pálí but Sanskrit, and they were translated by the Northern Buddhists into their own languages, Mongol and Tibetan. It does not appear that they have any Pálí books. The Chinese have obtained their writings from both quarters, and they probably have Pálí works brought from Ava or Ceylon. They have also, according to M. Burnouf, translations of the same Sanskrit works that are known in the North. It is by no means established, therefore, that Pálí was the sacred language of the Buddhists at the period of the inscriptions, and its use constitutes no conclusive proof of their Buddhist origin. It seems more likely that it was adopted as being the spoken language of that part of India where Piyadasi resided, and was selected for his edicts, that they might be intelligible to the people. Hence, also, the employment of different alphabets, that of Kapur di Giri being the alphabet current in Affghanistan and Bactria, as we know from the Græco-Bactrian coins. The use of the provincial or local alphabet was evidently designed for the convenience of those to whom it was familiar, while the ancient form of the Devanágarí was that employed in Hindústán as being there in general use. The popular currency of the language, admitting that it might have been the spoken dialect of the north-west of India, would be more likely to prevent, than to recommend its use as a 'sacred' language, and its being applied to such a purpose by the Southern Buddhists was in some degree probably owing to their being as a people ignorant of it, and it would then assume in their eyes a sanctity which as a spoken dialect it was not likely to possess. At the same time, we can scarcely suppose that the language of the inscriptions was understood in all the countries where they have been discovered, beyond the Indus, at Dihlí, in Behar, in Orissa, and Gujarát, where we know that very different dialects, however largely borrowing from a common source, at present prevail. Neither is it likely that edicts intended to regulate the moral conduct of the people at large should have been intelligible only to Buddhist priests, or should have been perpetuated on pillars and rocks solely for their edification. We may therefore recognise it as an actually existent form of speech in some part of India, and might admit the testimony of its origin given by the Buddhists themselves—by whom it is always identified with the language of Magadha or Behar,[1] the scene of Sakya Sinha's first teaching—but that there are several differences between it and the Mágadhi, as laid down in Prakrit grammars, and as it occurs in Jain writings. It is, as Messrs. Burnouf and Lassen remark, still nearer to Sanskrit,[2] and may have prevailed more to the north than Behar, or in the upper part of the Doab, and in the Panjáb, being more analogous to the Sauraseni dialect, the language of Mathura and Dihlí, although not differing from the dialect of Behar to such an extent as not to be intelligible to those to whom Sakya and his successors addressed themselves. The language of the inscriptions, then, although necessarily that of their date, and probably that in which the first propagators of Buddhism expounded their doctrines, seems to have been rather the spoken language of the people in Upper India, than a form of speech peculiar to a

[1] Turnour's 'Introduction to the Mahawanso,' xxii., Sá Mágadhi mula bhása.

[2] Essai sur le Pálí, p. 187, 'La Palie était presque identique à l'idiome sacré des Brahmanes, parce qu'elle en dérivait immédiatement.'

class of religionists, or a sacred language, and its use in the edicts of Piyadasi, although not incompatible with their Buddhist origin, cannot be accepted as a conclusive proof that they originated from any peculiar form of religious belief.[1]

[In a subsequent paper 'on Buddha and Buddhism' (J.R.A.S., xvi. 229), Professor Wilson enters more comprehensively into the linguistic question touched upon in the above note: the following extracts will put the reader in possession of that author's present view in regard to the comparative antiquity of the use of Sanskrit and Pálí[1] in the Buddhist Scriptures:—

The great body of the Buddhist writings consists avowedly of translations; the Tibetan, Mongolian, Chinese, Cingalese, Burman, and Siamese books, are all declaredly translations of works written in the language of India—that which is commonly called *Fan* or more correctly *Fan-lan-mo*, 'or the language of the Brahmans;' and then comes the question, to what language does that term apply? Does it mean Sanskrit, or does it mean Pálí, involving also the question of the priority and originality of the works written in those languages respectively; the Sanskrit works as they have come into our hands being found almost exclusively in Nepál, those in Pálí being obtained chiefly from Ceylon and Ava. Until very lately, the language designated by the Chinese *Fan* was enveloped in some uncertainty. . . . The mystery, however, is now cleared up. In the life and travels of Hwan Tsang, written by two of his scholars and translated from the Chinese by M. Julien, the matter is placed beyond all dispute by the description and by the examples which the Chinese traveller gives of the construction of the *Fan* language, in which he was himself a proficient. . . We learn from him. . . . All this is Sanskrit, and what is more to the point, it is not Mágadhi, the proper designation of the dialect termed in the south, Pálí. . . Hwan Tsang also correctly adds that the grammar in use in India, in his time, was the work of a Brahman of the north, a native of Tula or Sálátula, named *Po-ni-ni*, or Pánini, the well-known Sanskrit grammarian. . . . The Buddhist authorities of India proper, then, were undeniably Sanskrit; those of Ceylon might have been Pálí or Mágadhi; were they synchronous with the Sanskrit books, or were they older, or were they younger, more ancient, or more modern? . . We may be satisfied, therefore, that the principal Sanskrit authorities which we still possess were composed by the beginning of the Christian era at least; how much earlier is less easily determined. . . .

We may consider it, then, established upon the most probable evidence, that the chief Sanskrit authorities of the Buddhists still in our possession were written, at the latest, from a century and a half before, to as much after, the era of Christianity.

Now what is the case with the Pálí authorities of the south? . . The principal Pálí works of the south, are, therefore, of a period considerably subsequent to the Sanskrit Buddhistical writings of India proper, and date only from the fifth century after Christ.

[1] Pálí, means—original text, regularity.—Maha. Introd. xxii.

Professor Max Müller seems to concur in these deductions, judging from his remark:—

'After Buddhism had been introduced into China, the first care of its teachers was to translate the sacred works from the Sanskrit, in which they were originally written, into Chinese.'—'Buddhism and Buddhist Pilgrims,' p. 24. London, 1857.

Col. Sykes, however, I observe, still considers that he has evidence to show that 'the books taken from India to China by the Chinese travellers between the fourth and seventh centuries were equally in Pálí' (*Times*, May 21, 1857), basing his argument to that end upon M. Gutzlaff's catalogue of 'Chinese Buddhistical Works,' published in vol. ix. of the 'Jour. Roy. As. Soc.', p. 199 (1848).

# XVIII.—*RÉSUMÉ* OF INDIAN PÁLÍ ALPHABETS.

[In continuation of the subject treated of in the supplement to Art. XVII., p. 8, I extract the substance of Prinsep's 'Completion of the Pálí Alphabet,' which the decipherment of the Girnár text of the edicts of Asoka enabled him to verify.]

First, however, I must take a review of the Girnár alphabet, for it is evident that it contains many additions to the more simple elements of the pillars. These additions, to which only I have time to allude, will be found to complete the alphabet to the existing standard of the Pálí of Ceylon.

The most remarkable change observable in the alphabet has already been noticed in my paper of last June, namely, the substitution of the letter ı for ⅃ in all words now written with an *r* in Sanskrit, but on the pillars spelt with an *l*, as ⅃⁻ε⁻ ⅃ᴧ⅃⊙, etc., now corrected to ΓΕ-⅃ᴧı⊙ *rája, dasaratha*, etc. Although there are many words in the Sanskrit in which the use of the *l* and *r* is indifferent, still the invariable employment of the former liquid, does not appear to have been ascribed to any of the numerous Prákrits or even the Apabhránsas, by the Sanskrit grammarians. . . . . .

Of other letters made known by the Girnár tablets, we may notice first in order the ᴗ or *gh*, which can no longer be denied a place, or be confounded with any other letter, because it now occurs in the well known word *gharistáni* (S. *grihastáni*), and in *megha, ghára, gháta*, etc., of the Kalinga and Sainhadri inscriptions. These words, it must be observed, occur only in those tablets of the Katak inscription wherein the letter ı is used, and which so far resemble in dialect those of Girnár. The orthography of *grihastáni* on the pillars is *girithání*. It does not therefore follow necessarily, though there is every probability thereof, that the *g* is never used for *gh*; but when we find the aspirate

present in other words of the same monuments, such as *ghanti*, *sanghathasi*, etc., we are bound not unnecessarily to aspirate the simple *g*, where it can be read without doing so.

The nasal of the first class of consonants, or gutterals, has not been yet recovered, because its place is generally supplied by the *anuswara;* but in one or two places I think the ङ may be traced in its primitive form of ⊏: at any rate it may be safely *constructed* so, from the analogy of the form in No. 2 alphabet ⊏ also found on the coins in the name *Simha vikrama* (written sometimes *singha*), and from the more modern form of the Tibetan ⊏ *ng*.

The letter *jh* ञ्झ, is of rare occurrence, even in the Sanskrit. It is not therefore to be wondered at, that we should be tardy of discovering it in the ancient alphabet. Yet in Pálí this letter takes the place of the Sanskrit ध्य in *madhya, madhyama,* 'middle,' and perhaps of *rj* in *nirjita* and of *rdy* and *ryy* and other similar compounds which in pronunciation assimilate to *jh;* and it is thus more likely to be found in a Pálí than a Sanskrit monument. On my first review of the pillar alphabet, I was inclined to look upon the letter ꠇ as *jh*, from its occurrence in the word 𐨨𐨪𐨬 *majhimá*, coupled with *ukasá* and *gevayá*, domestics and ascetics, but it seemed better explained by *ri* in other places. A similar expression in one of the Girnár tablets again leads me to consider it as *jh*, viz.: '*sankhitena, majhamena, vistitena,*' where the central word is written 𐨨𐨪𐨯 both in the Girnár and in the Dhauli versions of the concluding paragraph. Again, in the pillars it is generally inflected with the *i* or the *á* vowel mark, which could not be the case with *ri;* and lastly, it bears considerable affinity to the Bengalí ঝ *jh* which also resembles the *rí* of the same alphabet; I therefore now pronounce ꠇ without hesitation to be a *jh;* and I must modify former readings accordingly.[1]

The *n* of the second class, or palatials, is an acquisition upon which there is no room to doubt. It is a peculiarity in the Pálí language that this letter, which has the pronunciation of *ny*, both supplies the place of the Sanskrit compound letter *jn* in such words as *rájnah* राज्ञः

[1] This it is not difficult to accomplish: ex. gr. in the western tablet of the Feroz lát, *ndsantan nijhipayitá dánamdahanti*, may be Sanskritized as follows: नार्शंतंनिर्धा पायित्वा दानं दास्यन्ति, 'expelling the murderer (from the town or community) they shall give him an alms.' And in the edict regarding animals,—*ta se sajive nojhápayitaviye*—'such while life remains shall not be abandoned,' उज्झापयितव्यः and, in the last tablet, for *dhamma niyame nijhayitá bhuye*, read निर्जेत्यभवेत् 'the rules of dharma shall be invincible.'

of a prince, and आज्ञा *ájná*, 'order'—and of ञ, or *ny* in such words as अन्यतः *anyatah*, else, अन्यानि *anyáni*, others; and in मन्यते *manyate*, Pálí *manṇate*, deems. Now these and many other examples occur most opportunely in the Girnár inscriptions—the letter 𑀡, with the necessary vowel inflections 𑀡𑁂 *ṇe*, 𑀡𑀸 *ṇá*, or 𑀡𑁄 *ṇo*, being invariably employed in all such cases; as in the sixth tablet above quoted, 𑀅𑀡𑀢 𑀅𑀕𑁂𑀡 𑀧𑀭𑀸𑀓𑀫𑁂𑀡 *aṇata agena parákamena:* whereas in the Dihlí pillars the word *aṇata*, for instance, is written 𑀅𑀦𑁆𑀦𑀢 *aṇṇata*, with the dental *n*, the only one there made known to us, doubled by the *anuswara*.

The next form of *n*, belonging to the *cerebral* series, has already been made known to us from the Sainhadri cave inscriptions, 𑀡; and the modern derivative forms were on that occasion described (see page 1045 of volume vi.) In the present inscription this *n* invariably follows the letter *r*, as in Sanskrit; ex. gr. 𑀥𑁆𑀫𑀘𑀭𑀡𑀁 *Dhammacharaṇam* 'the progress of religion.' The vowel affixes are united to the central perpendicular stroke as 𑀡 𑀡𑀺 𑀡𑀼 *ne, ná, no*. A few words written in Sanskrit with the dental *n*, are found in the inscription written with 𑀡, as *janasa, dasaṇam* (7th and 8th tab.) and the same holds good of the grammatical Pálí of books. It should be remembered that, in the regular Prákrit, this is the only *n* which ever stands singly in a word.

The only letter of the labial series which was yet wanting to us, the *ph*, is most fortunately recovered through the indubitable expression *máláni cha phaláni cha* in the second tablet of Girnár—"both roots and fruits'—written 𑀫𑀸𑀮𑀸𑀦𑀺 𑀘 𑀥𑀮𑀸𑀦𑀺. In the letter 𑀥 we at once perceive the prototype of the *ph* of No. 2, and the ཕ of the Tibetan alphabet: and we see the reason why this was departed from in the Nágari form, फ, by turning the stroke outward, lest by turning inwards it should be confounded with the ष or *sh*, a letter unknown in our old alphabet. With reference to my former remark on the duplication of alphabetic forms to produce the aspirates, it may be adduced as an additional argument for such an assumption that in the oldest of three plates from Kaira with copies of which I have been lately favoured by Dr. A. Burn, the *ph* of the word *phala* is twice written *pp* in lieu of *ph*, which is the augmented or aspirated form used in the other plates, and which is more consistent with the original type now disclosed to our knowledge.

Of the *bh* I would merely take this opportunity of noticing that I have discovered the period and cause of the two very opposite forms of this letter which are found in later alphabets, as for instance the Mahratta *bh* and the Tibetan *bh* (which agrees with the Devanágari or Kutila of the 10th century) and have proved them both to descend from the original 𑀪; the Mahratta may be said to follow naturally

from the Sainhadri form; the other I have traced on the Saurashtra coins of Skanda and Kumara Gupta, where sometimes the one and sometimes the other form is employed, the latter being the natural course followed by the pen in imitating the sculptured letter , beginning at the top, viz.: , whence would gradually follow , and with the headstroke, common to all the modern characters.

The Pálí contains but one *s*. We cannot, therefore, expect to find in our ancient alphabet the prototype of either the Sanskrit or . Of these letters I only notice the early forms, because I have inserted them in the accompanying lithographed plate. The modern form of would seem to be derived from the of the Samudragupta, or No. 2 alphabet, where again it might be presumed that it was introduced as a trifling modification of the letter , or *s*,—in fact, by closing the outer stroke or doing the same thing to this as was done to the *p*, to have the effect of duplication or aspiration. Or, it may be more proper to consider it a *written* modification of the more ancient form found on the copper-plate grants of the third century dug up in the Gujarát peninsula, whence the transition is more evident and palpable to the various Pálí and Sinhalese forms, the Cashmere form and even the modern Nágarí and Bengálí.

It is not so easy to trace the origin of the *táliba sha*, , in the old alphabet, but there is plausible reason to suppose that this was originally merely the *murdina* or cerebral *s* , turned in an opposite direction, invented to denote another modification of the sibilant required in the refinement of the Sanskrit alphabet. In the oldest Gujarátí plates, these are written with simple linear marks in the middle, and exactly the same structure is retained in the square Pálí alphabet or stone letter of Barma, except that the stroke in the centre is contracted into a dot; further, they are merely rounded in the modern Burmese for the facility of writing. In no other alphabets that I know of are the analogies to the original type so faithfully preserved as to shew that these two sibilants were originally the same letter reversed in position, a mode frequently adopted, as I have had occasion to notice before, in Indian alphabets, to represent slight modifications in sound (see vol. vi. p. 475-6.)

The most ancient Sanskrit form, however, of the táliba *sh* is one I have just discovered on a genuine inscription of the time of Chandragupta [Sáh Inscription]. This type is evidently the original of the form so common on early Hindu coins and inscriptions, whence are directly descended the Tibetan , the Bengálí , and the modern Nágarí , which heretofore presented a kind of anomaly in the derivation of our alphabetical symbols.

Having thus recovered the complete, and, as I consider it, the primeval alphabet of the Indian languages, I have arranged in the accompanying plate the changes each letter has undergone in successive centuries, as deduced from absolute records on copper or stone. The table furnishes a curious species of palæographic chronometer, by which any ancient monument may be assigned with considerable accuracy to the period at which it was written, even though it possess no actual date.

I begin with the sixth century before the Christian era, because I suppose that the alphabet which we possess, as used by the Buddhists of a couple of centuries later, was that in which their sacred works had been written by the contemporaries of Buddha himself, who died in the year 543 B.C.

What in some measure confirms this hypothesis is, that the Sanskrit character of the third century before Christ (of which I have introduced a specimen in the plate from the genuine document above alluded to), differs only so much from the original form as the habits of a class of writers distinct in religion and more refined in language might naturally introduce;—just as we afterwards find an equal degree of modification from the type of Asoka's time, in the Sanskrit alphabet of five centuries later, on the pillars.

The Asoka alphabet (the Sanskrit one) agrees very closely with that of our Sauráshtra coins, which may thence be pronounced to be anterior to the Gupta series. The Gujarát plates, dated in the third century of the Samvat era, differ but little from the Allahábád pillar or

Samudragupta inscription, but that little is all in favour of their superior antiquity.

Of the more recent alphabets it is unnecessary to say anything. The Tibetan is acknowledged to be of the seventh century. The Kutila alphabet is taken from the inscription sent down in facsimile by Col. Stacy from Bareli;—we learn thence that the artist was of Kanauj; and we see that the Bengálí, which was drawn from the same focus of learning nearly a century afterwards, does not differ more from it than the modifications it has undergone since it was domiciled in the lower provinces will explain;—indeed, all old Sanskrit inscriptions from Benáres to Katak differ only from the Kutila type in having the triangular loop व, instead of the round one व.

A hundred other modifications of the primitive character might be easily introduced were I to travel southward or to cross to Ava or Ceylon; but I purposely avoid swelling the table, and include only those epochas of the Indian alphabet which can now be proved from undeniable monuments. On a former occasion[1] the Amaravati, Hala Canara, and Talinga alphabets were traced to the Gupta as their prototype, and thus might others be deduced; but another opportunity must be sought of placing the whole in a comprehensive table.

In conclusion, I may again regret that our printers did not take for their standard the form that would have served to blend the Bengálí and the Hindí into a common system!

[Prinsep's observations introductory to his Chronological

[1] 'Jour. As. Soc., Beng.', vol. vi., p. 219 (March, 1837).

Pl. XXXVIII.

# MODIFICATIONS OF THE SANSKRIT ALPHABET FROM 543 B.C. TO 1200 A.D.

k kh g gh ñ ch chh j jh ñ ṭ ṭh ḍ ḍh ṇ l th d dh n p ph b bh m y r l v h s ṣ ṣh

X Γ Σ N T Θ D Π Φ B M Υ Ρ Λ Ϩ

1 FIFTH CENT. B.C. *Rise of Buddhism*

2 UNCERTAIN *Western Caves*

3 THIRD CENT. B.C. *Sanscrit inscript. of Asoka, Junagarh*

4 SECOND CENT. A.D. *Gujerat dated plates*

5 FIFTH CENT. A.D. *Allahabad inscrip. of the Gupta dynasty.*

6 SEVENTH CENT. A.D. *Tibetan alphabet formed from Sanscrit*

7 NINTH CENT. A.D. *Kutila inscr. from Bareilly, A.D. 992.*

8 ELEVENTH CENT. A.D. *Bengali alphabet as now modified Adisur 1065 A.D.?*

9 MODERN DEVA NAGARI ALPHABET

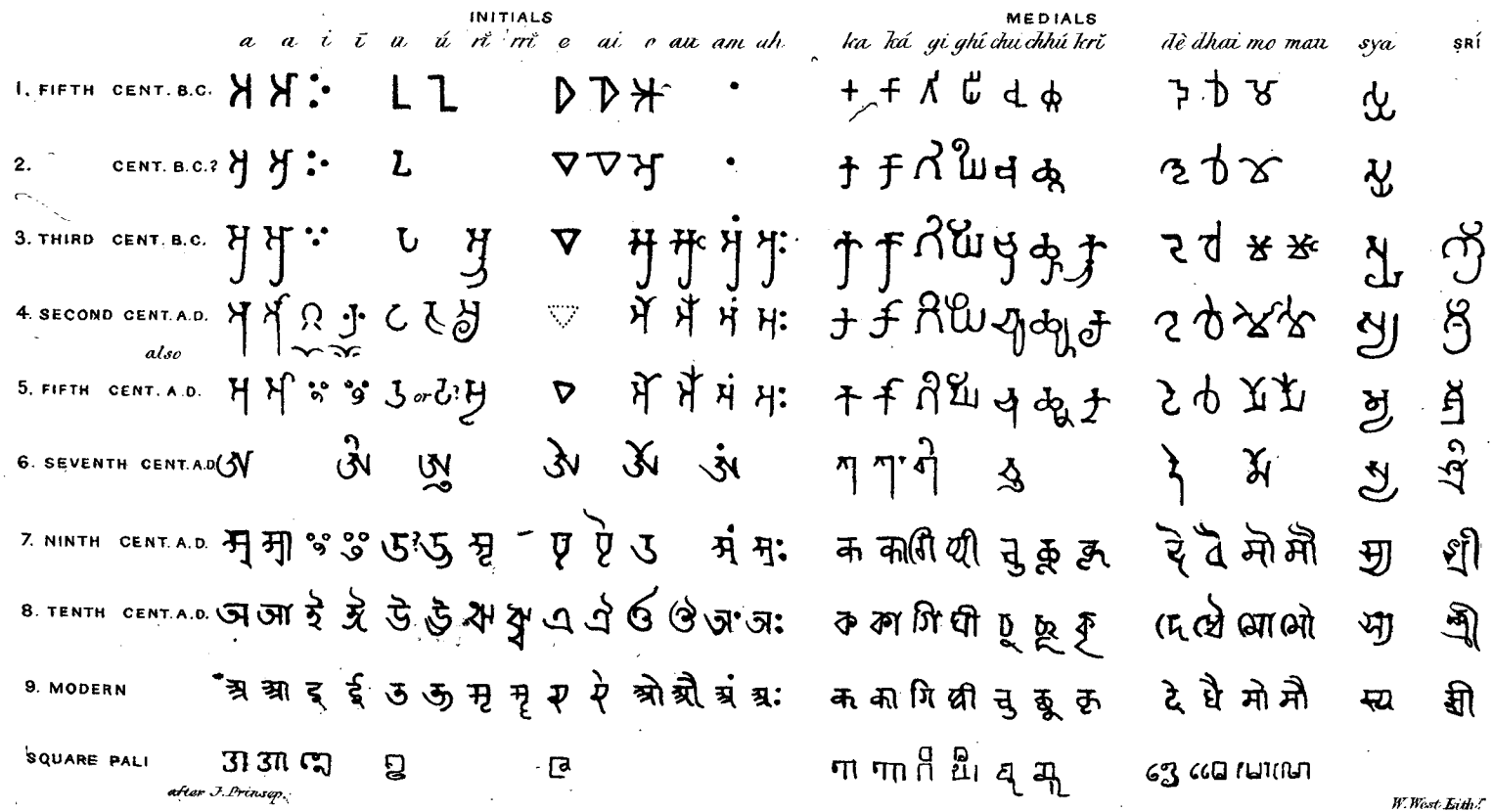
OLD PALI ALPHABET OF THE BURMESE *compare with A.D. 200.*

after J. Prinsep.

Published by Stephen Austin Hertford.

W. West Lith.

# MODIFICATIONS OF THE SANSKRIT ALPHABET. VOWELS.



I. Regarding the probable date of the earliest use of the type of character, of which Asoka's edicts present us with the first extant example, Prinsep hazarded an opinion that two centuries of anterior currency might fairly be assigned to that style of writing. This idea pre-supposed somewhat of an exclusively sacred character, as pertaining to the alphabet; but by no means implied that the literal series did not pre-exist in an earlier or less perfect form. A conjectural limit of this description may of course be indefinitely extended or contracted, but I myself should be disposed to enlarge considerably the period of the previous culture of so perfect and widely-spread a system of alphabetical expression.[1]

II. As respects the derivation of the literal series, Prinsep had clearly a leaning towards associating it with the Greek, grounded upon the similarity and almost identity of some of the forms of each, the phonetic values even of which fell into appropriate accord. That these similitudes exist there can be no doubt, but not in sufficient numbers or degree to authorize an inference that the one system borrowed directly from the other. Prof. Weber, following out Prinsep's idea in another direction, has sought to establish a Phœnician origin for the Indian alphabets.[2] This theory I regard as altogether untenable, for we not only have to get rid of the inversion of the direction of the writing—sufficiently intelligible in the case of the Greek derivative from that stock—but we have to concede a much larger amount of faith to fanciful identities of form; and lastly, we have to place this excellently contrived alphabet in juxtaposition

[1] Huen Thsang gives the following account of the origin and spread of the Indian alphabet:—"Les caractères de l'écriture ont été inventés par le dieu Fan (Brahmâ) et, depuis l'origine, leur forme s'est transmise de siècle en siècle. Elle se compose de quarante-sept signes, qui s'assemblent et se combinent suivant l'objet ou la chose qu'on veut exprimer. Elle s'est répandue et s'est divisée en diverses branches. Sa source, s'étant élargie par degrés, elle s'est accommodée aux usages des pays et aux besoins des hommes, et n'a éprouvé que de légères modifications. En général, elle ne s'est pas sensiblement écartée de son origine. C'est surtout dans l'Inde centrale qu'elle est nette et correcte."—'Mémoires, etc.,' p. 72.

[2] Ueber den Semitischen Ursprung des indischen Alphabetes.—'Zeitschrift,' 1856, p. 389.

and contrast with a system of writing manifestly claiming a quasi-Semitic parentage, but as imperfect and ill-adapted for the expression of Indian languages as it is possible to conceive, which we find in concurrent use in the contiguous provinces of Northern India. Certainly, to judge by internal evidence, the Pálí alphabet of Asoka's day bears every impress of indigenous organization and local maturation under the special needs and requirements of the speech it was designed to convey. Though, amid the marvels that are daily coming to light in regard to the march of languages and the varieties of the symbols employed to record the ancient tongues, it might be possible to concede so much of identity to the two sets of characters as a common but indefinitely remote starting point might be held to imply.[1]

III. Was the Pálí alphabet sacred or profane? classic or vernacular? monumental or popular? The answer to these queries must, I think, be decidedly against its exclusive devotion to the former, in any case; it will be safer to say that, up to a certain period, it was employed both for one and the other, and stood as the sole medium of graphic communication. This primitive character may well have proved sufficient for all purposes of record, so long as the language it was called upon to embody remained as simple as that for expression of which we may suppose it to have been originally designed

[1] [M. Barthélmy St. Hilaire, in a review ('Journal des Savants,' January, 1857), of the valuable work of M. E. Renan, on the Semitic Languages (Paris, 1855), enters into an examination of the relative claims to priority of the Indian and Phœnician alphabets. His remarks on the remote antiquity and independent and spontaneous elaboration of the Indian alphabet are sound, but the general argument is marred by a want of due discrimination between the Pálí and Sanskrit influences, and is deficient in all reference to the co-existent Semitic system of writing of the northern provinces. Though I do not concur in any conclusion that one alphabet must necessarily have been derived from the other, I append M. St. Hilaire's opinion on the question as it stands between the two:—"Je ne vois pas qu'il repugne à la raison que le système le plus parfait de l'alphabet soit aussi le plus ancien. L'alphabet sémitique n'est pas précisément plus simple, quoique moitié plus court; il est, à vrai dire, moins complet. Pour ma part, je comprends mieux les Sémites recevant de troisième ou quatrième main l'alphabet indien, et l'adaptant à leur usage, en le réduisant de moitié et en le mutilant, que je ne comprends les Indiens recevant cet alphabet informe et confus et le portant à la perfection que nous savons.'—p. 52.]

and adapted. On the introduction of the Sanskrit element, it was necessarily subjected to previously-needless combinations, and under this and other processes perhaps lost some of the stiffness of outline, which it may, nevertheless, have retained together with its original literal simplicity among the vulgar,[1] even in the presence of an improved style of writing, suited for more polished literature; as in the existing orthography of Hindí, contrasted with the elaboration of Sanskrit alphabetical definitions.[2] Prinsep

[1] Major Cunningham speaks of 'the extremely rare use of compound letters' in the Buddhist legends engraved on the Bhilsa Topes. He remarks, 'only three instances occur throughout all these inscriptions; and they are certainly exceptions to the common practice of Asoka's age, which adhered to the simplest Páli forms.'—'Bhilsa Topes,' p. 268.

[2] [I have elsewhere noticed certain evidences bearing on this question, which I may append in further illustration of my present argument]: 'I imagine it must be conceded, whether on the indications afforded by inscriptions, coins, or Buddhist relics, that the ancient Páli or Mágadhí alphabet had once a very extended currency, and likewise that for a lengthened period it retained its separate identity. It occurs in Asoka's edicts at Dihlí,[a] Allahábád, Matia, Bakra, Dhauli, and Girnár; its appearance in these several localities[b] would, *prima facie*, imply, either that it was intelligible to the people at large throughout the circle embraced within these geographical boundaries, or that it was the recognized sacred alphabet of Buddhism: opposed entirely to the latter supposition is the departure from its use in the Kapur di Giri text of the edict itself, and the modification the language is seen to have been subjected to in some of the Páli transcripts, to meet apparently the local dialects of each site.' [I do not imply from this that the edicts were ordinarily designed to be within reach of the vision of the people, as was the case with the Greek tables, even if it was expected that the literary cultivation of the population at large was sufficient to create many readers.] "On coins, the characters can scarcely be thought to hold any religious signification, but the available medallic testimony contributes largely to the inference that these characters formed the ordinary medium of record in the majority of the states included within the limits above adverted to. In this alphabet exclusively are expressed the legends of numerous series of coins of purely local type,[c] its characters are found associated on the one part with the Greek of Agathocles and Pantaleon,[d] and its phonetic signs are conjoined with counterpart Arian legends on certain classes of the Behat coins.[e] The Bud-

[a] Of the two stone pillars at Dihlí, one was moved down from near Khizrábád, at the foot of the Himalayas—the other was taken from Mirat—'Jour. Arch. Soc. Delhi,' p. 70, 1850 [vol. i., p. 324.]

[b] Other inscriptions in this character occur at—1. Sanchi—'Jour. As. Soc. Beng.', vol. vi., pl. xxvii., p. 461, and vol. vii. pl. lxxiii., p. 562; 2. Gya—Caves, 'Jour. As. Soc. Beng.', vol. vi., pl. xxxv., Nos. 2 and 3, p. 676; these are of the epoch of Dasaratha, who followed Suyasa, the immediate successor of Asoka! 3. Katak—Udayagiri Caves, 'Jour. As. Soc. Beng.', vol. vi., pl. liv., p. 1072; 4. Katak—Khandagiri Rock, 'Jour. As. Soc. Beng.', vol. vi., pl. lviii., p. 1080. And we may now add a but slightly modified form of writing as discovered in the Mehentélé inscription in Ceylon. 'Jour. Roy. As. Soc.', vol. xiii., p. 175.

[c] 'Jour. As. Soc., Beng.', vol. iv., pl. x. and xxxv., and vol. vii., pl. lx. and lxi.

[d] 'Jour. As. Soc., Beng.', vol. v., pl. xxxv., p. 8 and 9; 'Ariana Antiqua,' pl. vi., pp. 7, 8, 9, and 11.

[e] 'Jour. As. Soc., Beng.', vol. vii., pl. xxxii. [i. 203.]

himself has originated the inquiry as to how much a change of alphabetical symbols might be incident to the use of a more perfect language as compared with the necessities of the local Pálí; and to this I am disposed to attach even more weight than he apparently contemplated; the leading conception was suggested to him by the advance displayed in this direction by the Sáh inscription at Girnár, which, because it contained the name of Asoka, he conceived should be attributed to the reign of that monarch. He was content, therefore, to accept this system of writing as absolutely contemporaneous with that employed in the public edicts of the early patron of Buddhism. However, we need not now claim so distinct a concession as this, as Asoka's name is only made use of in the subsequent monument, as a whilom benefactor in a similar cause, for which the Sáh king claims credit at a later day.

IV. Among other causes that are liable to have affected the march of alphabetical divergence from the one fixed model, may be noted the cursive departure from the older form, which though not exclusively monumental, was evidently better suited for lapidary purposes than for facility and rapidity of expression by the amanuensis;[1] and, under this aspect, there would arise

dhist relics do little towards elucidating the expansive spread of this style of writing;[a] but—if rightly interpreted—they illustrate in a striking manner the antiquity of its ordinary employment in its even then fixed form.' [This inference, however, does not necessarily militate against my conclusion that, at a subsequent period, and in exceptional localities, the Pâli language and the Pâli letters did not become the special sectarian vehicles of the Buddhist faith, as opposed to the Sanskrit tongue and its more copious alphabet, whose use was affected by the Brâhmans.] Dr. Stevenson remarks, in speaking of the Nasik cave inscriptions, 'On the whole, we find that Brâhmans and Buddhists, in these early days of our era, lived in peace with one another, and were both favoured and protected by the reigning sovereigns; and that, among the former, the Sanskrit language was used in writing, and the Prâkrit by the latter; the two languages, probably, holding the same place to one another that the Sanskrit and the vernaculars do at present.'—'Jour. Bomb. Br. Roy. As. Soc.', July, 1853, p. 41.]

[1] [In my last paper on this subject I remarked, 'We have evidence, in sufficient abundance, to prove that the eastern nations often availed themselves of a cursive hand, in common with the more formal character reserved for inscriptions. These would each be naturally affected, in the ultimate determination of forms—by the material which had to receive the writing.

'Thus, the straight wedge-shaped elements of the cuneiform alphabet[b] were

[a] 'Jour. Roy. As. Soc.', vol. xiii., p. 108; 'Bhilsa Topes,' p. 299, etc.

[b] Layard, 'Discoveries,' etc., 346 and 601, etc., 'Jour. Bomb. As. Soc.', vol. xvi. p. 215.

a still more obvious reason for the rounding off of angularities as the complex orthography of the Sanskrit gained head upon the simple letters of the local Pálí.[1]

singularly well fitted for easy expression on tablets of Babylonian clay, and equally suited to rock inscriptions, while the written hand, executed only on a smooth surface, presented no difficulties to any series of curves or complicated lines. In addition to leather[a] and other materials, the ancient Persians, we also learn, wrote upon *Tûs*[b] (Birch-bark). The Indians, we know, adapted this substance to the same uses,[c] and possibly the Indian Vedas are indebted for their preservation to this very material; whether its employment was limited to the population whose dialects were expressed in the Arian character we have no means of saying, but in all probability, if the Northern Indian races knew of its use, the Mágadhis would not have remained long deprived of it, or some suitable substitute; that they also wrote with ink is amply established by the discovery of letters so written on the relic caskets at Sanchi.[d]

Since the above was written, I have met with a most apposite illustration of the justice of my opening remark, in the shape of a Babylonian clay-tablet—now in the British Museum—of about 600 B.C., which is impressed with cuneiform characters on the one face, and inscribed with Phœnician letters on the other. The Babylonian character is not very perfect, but the Phœnician has evidently been difficult to execute, in comparison to the simple lines of the associate inscription; the curves of the letters, and the depth it was necessary to give the lines, to ensure permanence, have clearly puzzled the stile of the artist, whose knowledge of, and aptitude in, the formation of the letters, are otherwise sufficiently apparent. While adverting to these subjects, I would further draw attention to the double system of writing in use in ancient times, as exhibited in the concurrent record of spoils, etc., almost uniformly depicted in the Konyunjik marbles, where the one scribe uses a broad stile with a clay cylinder or book-tablet; and the other appears to be *writing* with a more pointed instrument, on some pliable material.—See Layard, ii. 184, 'Monuments of Nineveh,' pl. 58; as well as Nos. 59 and 15* British Museum.

To revert, however, to the Indian question, I may remark, in conclusion, that the tradition in Huen Thsang's time, evidently went to the effect, that the early Buddhist scriptures of Kásyapa's council were written 'sur des feuilles de *tâla* (palmier),' and that, in such form, (il) 'les répandit dans l'Inde entière.'—'Histoire,' p. 153. Albiruni, in speaking of his own experience in the eleventh century, notices the use of paper (كاغذ), and the local employment, 'dans le midi de l'Inde,' of the leaves of the *Târi* (تاري); to which he adds, 'mais dans les provinces du centre et du nord de l'Inde, on employe l'écorce intérieure d'un arbre appelé *touz* (توز). C'est avec l'écorce d'un arbre du même genre qu'on recouvre les arcs: celle-ci se nomme *bhouj*' (بهوج).—'Reinaud Mémoire sur l'Inde,' p. 305. Further references are given to 'Arrian,' l. viii., c. ix.; Foe-koue-ki,' p. 392, etc.]

[1] [Dr. Weber has instituted certain philological comparisons, in the hope of

[a] Assyria—P. H. Gosse, London, 1832, p. 546.

[b] Hamzæ Ispahâní كتاب تاريخ الامم, p. 961, and xxv. 'Libri inventi sunt, in quibus depositæ erant variæ eorum disciplinæ, omnes lingua Persica antiqua scripti in cortice tûz.'—See also 'Ayín-i Akbari,' vol. ii., 125.

[c] Masson in A. A. p. 60 and 84. See also fig. 11, pl. iii. *Ibid.* Masson continues his remarks on substances used to receive writing: 'In one or two instances I have met with inscriptions; one scratched with a stylet, or sharp-pointed implement around a steatite vase, extracted from a Tope at Darunta; another written in ink, around an earthen vessel, found in a Tope at Hidda; and a third dotted on a brass vessel.'—See also 'Reinaud Memoire sur l'Inde,' p. 305.

[d] 'Jour. Roy. As. Soc.', vol. xiii., p. 110; 'Bhilsa Topes,' 299; 'Jour. As. Soc. Beng.', vol. xxiv., p. 394.

This Sanskrit action upon the indigenous form need not be limited to the date at which we are now able to cite extant examples of the Pálí letters; and, as I have claimed for the latter an antiquity very inadequately represented by their use under Asoka, so I may assume an independent process of maturation under the influence of the former language, in written documents, which is not necessarily restricted in its point of departure to the date of the lapidary models of which that monarch has left us examples. Indeed, these very monuments, in their bearing upon each other, already exhibit the early phase of an irregular advance beyond the limitation of the normal letters, in the greater amount of compound consonants to be found in use in the Girnár edict, as contrasted with the Dhaulí transcript, and the still more simple records of the Eastern pillars, which, in point of time, are absolutely subsequent to the two former inscriptions. And this alone is sufficient to form a justifiable basis for a line of argument I have elsewhere adopted in reply-

being able to determine the initial method of writing in India by the definition of the primary meaning of the words employed to describe the endorsement of the edicts of Asoka. Following out the Greek and Latin analogy of the derivation of the art of writing, implied in the γράφω, 'to grave,' and *scribo*, 'to scratch,' he contrasts the inflections from the roots लिप and लिख, which occur in the opening passage of these inscriptions; the one signifying 'to smear,' and also 'to write;' the other, he affirms, meaning primarily 'to scratch into,' and, secondarily, 'to write.' Any exclusive induction, however, from these materials is denied to us in the fact that the two words occur in absolute juxtaposition, and almost as if they were convertible terms; there can be no difficulty in admitting that the one root exists with almost a leading meaning for writing in the South (and in Bengal लिप); while in the north it has retained a nearly exclusive signification for smearing, plastering, etc. The लिख, on the other hand, whether its primary intention was to scratch into, or, more probably, to draw a line, holds its position to a much greater extent in the dialects of India as the special indication of writing. However, these comparisons, incomplete and unsatisfactory as they must needs be, are complicated by a doubt as to the original derivation of the word *lipi*. In the Pálí transcripts of Asoka's edicts the orthography is assured; but in the Kapur di Giri text, in spite of Professor Wilson's most determined conversion of the initial letter, in the numerous instances in which it occurs, the word is palpably and uniformly *dipi* (*dipitam*, *dipikitam*, etc.), which, as Mr. Norris has shewn, finds a counterpart in position and meaning in the Persian Cuneiform Inscription ('Jour. Roy. As. Soc.', vol. x., p. 247, 250, lines 48, 55 of Tablet); and in the Scythic version it appears as *tipi*, with the same signification (vol. xv., pp. 19, 24, 187). The legitimate Arian *likhita*, occurs in one passage as the correspondent of the Pálí *likhitáti* (Girnár, i. 10); but usually the *dip* of the northern alphabet answers to the *likh* of the south (iv. 11, v. 9).

ing to those who follow too implicitly Prinsep's first idea of the progress of writing, and who seem

Disposed to admit of but one single element, as liable to affect the march of alphabetical development—that of time. To show how fallacious any notion of a *necessarily* progressive change would be, I may call attention to the very slight modification that is seen to have taken place in the local alphabets of Gujarát, etc., during several centuries; and I would inquire, if this argument is to hold good, how much of difference ought we to be able to detect between the alphabet of the Vallabhi copper-plates, which they would date in the sixth century A.D.,[1] and the style of writing in use in the Western Caves, which is almost identical with the characters in prevalent use among the Buddhists in the 3rd century B.C. And yet, a reference to the facsimiles in pl. xxxvii. will demonstrate how essentially limited the alterations effected by this lapse of ages really were! Prinsep, as we have seen, was prepared—with his usual fairness—to concede that there were other causes likely to influence these alphabetical mutations, though his original idea had clearly been to assign all impulse in this direction to the effect of time. Had he lived to perfect his theory, I doubt not that he would have accepted other agencies as playing an important part in the results to be accounted for: prominent among these would, I think, have to be placed, the advance or retardation due to nationality or other local influences; otherwise it would be difficult indeed to account for the various separate alphabets that we find in all their independent diversity at a later period of Indian progress.[2]

Prinsep's own impression, above reprinted, will display how little reliance could

[1] 'Bhilsa Topes,' p. 149.

[2] As my readers may be glad to learn what Albiruni says on the state of the distributive varieties of writing current in his day, I append M. Reinaud's version of the entire passage:—'On compte plusieurs écritures dans l'Inde. La plus répandue est celle qui porte le nom de *siddha-matraca* (سد ماترک) ou substance parfaite; elle est usitée dans le Cachemire et à Benarès, qui sont maintenant les deux principaux foyers scientifiques du pays. Ou se sert également de cette écriture dans le Madhya-Deça, appelé aussi du nom d'Aryavartta. Dans le Malva, on fait usage d'une écriture appelée *nagara* (ناکر): celle-ci est disposée de la même manière que la première; mais les formes en sont différentes. Une troisième écriture, nomée *arddha-nagary* (اردناکري), c'est-à-dire à moitié nagari, et qui participe des deux premières, est usitée dans le Bhatia (بهاتيه) et dans une partie du Sind. Parmi les autres écritures, on peut citer le malcâry (ملقاري), usité dans Malcascheva (ملقشوا) au midi du Sind, près de la côte; le besandiba (بسندب), employé à Bahmanava, ville appelée aussi Mansoura; le karnâta (کرناٹ), usité dans le Karnate, pays qui donne naissance aux personnes appelées, dans les armées, du nom de Kannara (کنڑ); l'andri, employé dans l'Andra-Deça ou pays d'Andra (انتر ديش); le dravidi, usité dans le Dravida ou Dravira; le lari, dans le Lar-Deça ou pays de Lar; le gaura (کوري), dans le Purab-Deça (پورب ديش) ou région orientale (le Bengale); et le bikchaka (بيکشک) dans le Oudan-Pourahanâka (اودنپورهناک). La dernière écriture est celle dont se servent les bouddhists (البد).'—M. Reinaud, 'Mémoire sur l'Inde,' p. 298.

be placed on a judgment which did not take this element into consideration, for he assigns, on the mere ground of forms of letters, a higher antiquity to the Gujarát copper-plates, than he does to the Gupta inscriptions; whereas, we now know, that the Guptas preceded the Vallabhis!

Had he confined himself to tracing the alphabetical advances made by these different sections of Indian races, instead of comparing two series of literal signs that had been thus far matured by different hands, he would have worked upon surer ground. To support my assertion, I would direct attention to the varieties of types of letters to be found on the nearly contemporaneous inscriptions of the Gupta dynasty. If we examine the Allahábád writing,[1] and contrast it with that on the Bhitari Lát,[2] we discover considerable difference between the general configurations of the majority of the characters in each—varying from scarcely perceptible modifications to an absolute difference of form in others; for instance, the ख, ग, ध, प, and ग्र are virtually the same characters in both inscriptions, but their outlines are by no means identical, while the signs ण, म, ह, and स are, so to speak, different letters. To carry out the contrast, let us refer to the Bhilsa[3] inscription. Here again we find a general change in the aspect of the letters and most distinct modification or absolute divergence from the Allahábád type in the following characters—ख, ङ, ण, ध, प, भ, म, र, ह, ग्र, ष, and स.

V. As to the possible influence of the Semitic character of Northern India on the collateral Pálí; I should reduce this to the very minimum under its direct Palæographic aspect,[4] and should even prefer to advocate the converse proposition. There are here also some singular alphabetical coincidences which, however, had better be reserved for examination under the notes on the Arian character. A point which adds materially to the difficulty of instituting any useful comparisons in regard to this division of the subject is our ignorance of the date of the introduction of the Arian branch of the Semitic tree into the regions south of the Hindú Kush and its extension into the sub-Himalayan belt towards Hastinapúr. For, as in the case of the Southern alphabet, its

[1] 'Jour. As. Soc. Beng.,' vol. vi., p. 969.—See Translation, vol. i., p. 233.

[2] 'Jour. As. Soc. Beng.,' vol. vi., p. 1.—English Version, vol. i., p. 240.

[3] 'Jour. As. Soc. Beng.,' vol. vi., p. 455.—Noticed at p. 245.

[4] [I am not at all certain, however, that the Arian alphabet did not contribute the letter Φ, the equivalent of ष in its own series, to serve in the Sáh inscription as ग्र. The original character has, to my perception, more of mechanical coincidence with the general tendency of the Arian formation of letters, than of homogeneity with the alphabet of the South; and it is curious to observe how soon the perpendicular centre stroke of the original became horizontal under local treatment. The proper Indian ь = ष, on the contrary, seems to have been of indigenous adaptation.]

earliest appearance, within our ken, is in the counterpart edict of Asoka at Kapur di Giri in the Peshâwur valley. Two items, however, suggest themselves as important in the general inquiry. (1) The greater amount of pure Sanskrit the Kapur di Giri inscription[1] carries in its text, as illustrating the descending course of that language[2]; and (2) the ultimate and not very long delayed extinction of all trace of the once extensively prevalent Arian character, and its supersession by the more exact and appropriate system of writing indigenous to the south![3]

[1] ['Jour. Roy. As. Soc.,' vol. xii., p. 236.]

[2] [Prinsep had already noticed this fact in connexion with other data then at his command—'The vernacular language of India at that period, then, varied in different provinces;—it approached more to the Sanskrit in the N.W.,' etc.—vol. vii., p. 280. The possession of several letters requisite for the due definition of Sanskrit orthography, but unneeded in Pâlí writing, is also important.]

[3] [I have usually avoided complicating the simple Palæographic inquiry—on which alone my data entitle me to speak—with any reference to the important light philology must be expected to throw upon the general question. I depart from my rule in this instance, in citing the original and highly valuable remarks of the author of the 'Drâvidian Grammar,'[a] regarding the existing state and probable early course of certain Indian languages. Mr. Caldwell's position may be stated in his own words:—'That the Drâvidian languages are to be affiliated, not with the Indo-European, but with the Scythian group of tongues; and that the Scythian family to which they appear to be most closely allied is the Finnish or Ugrian.'[b] [The scope of the term Drâvidian is defined by the author as follows:] 'The idioms which are included in this work under the general term 'Drâvidian' constitute the vernacular speech of the great majority of the inhabitants of Southern India. With the exception of Orissa and those districts of Western India, and the Dekhan, in which the Gujaráthí and the Maráthí are spoken, the whole of the peninsular portion of India, from the Vindhya mountains and the river Nerbudda (Narmadá) to Cape Cormorin, is peopled, and from the earliest period appears to have been peopled, by different branches of one and the same race, speaking different dialects of one and the same language—the language to which the term 'Drâvidian' is here applied; and scattered offshoots from the same stem may be traced still further north as far as the Rajmahal hills, and even as far as the mountain fastnesses of Beluchistán. The Gujaráthí, the Maráthí (with its offshoot the Konkaní), and the Uriya, or the language of Orissa, idioms which are derived in the main from the decomposition of the Sanskrit, form the vernacular speech of the Hindú population within their respective limits: besides which, and besides the Drâvidian languages, various idioms which cannot be termed indigenous or vernacular are spoken or occasionally used by particular classes resident in Peninsular India.' . . . . .

'The idioms which I designate as 'Drâvidian' are nine in number, exclusive of the Rajmahal, the Uráon, and the Brahuí.[c] They are as follows: 1, Tamil;

[a] 'A Comparative Grammar of the Drâvidian or South Indian Family of Languages, by the Rev. R. Caldwell, B.A. London, Harrison, 1856.'

[b] *Cf.* also Norris' Scythian text of the inscriptions at Behistun.—'Jour. Roy. As. Soc.,' vol. xv.

[c] The discovery of this Drâvidian element in a language spoken beyond the Indus proves that the Drâvidians, like the Aryans, the Græco-Scythians, and the Turco Mongolians, entered India by the North-Western route.—p. 23.

In this indeterminate state, I am content, for the present, to leave the general question of the progressive development of the writing of India proper; being convinced, that no uniform or absolute law can be enunciated applicable to the varied circumstances of the whole circle of the palæography of the

2, Telugu; 3, Canarese; 4, Malayâlam; 5, Tulu—[the remaining four are] entirely uncultivated, destitute of written characters, and comparatively little known—6, Toda or Tudara; 7, Kota; 8, Gond or Goand; 9, Khond or Kund, or, more properly, the Ku. The proportionable numbers of the several races by whom the languages and dialects mentioned above are spoken appear to be as follows:

| | | |
|---|---|---|
| 1 | 10,000,000 | 32,150,000 |
| 2 | 14,000,000 | |
| 3 | 5,000,000 | |
| 4 | 2,500,000 | |
| 5 | 150,000 | |
| 6 to 9 | 500,000 | |

'Whilst I regard the grammatical structure and prevailing characteristics of the Drâvidian idioms as Scythian, I claim for them a position in the Scythian group which is independent of its other members, as a distinct family or genus, or, at least, as a distinct subgenus of tongues. They belong not to the Turkish family, or to the Ugrian, or to the Mongolian, or to the Tungusian, . . . but to the group or class in which all these families are comprised. On the whole, the Drâvidian languages may be regarded as most nearly allied to the Finnish or Ugrian family, with special affinities, as it appears, to the Ostiak.'—p. 46.

The conclusions arrived at with regard to the Northern Indian languages are summed up thus—'It is admitted that before the arrival of the Âryans, or Sanskrit speaking colony of Brâhmans, Kshatriyas, and Vaisyas, the greater part of Northern India was peopled by rude aboriginal tribes, called by Sanskrit writers Mlêchchas, Dasyus, Nishâdas, etc.; and it is the received opinion that those aboriginal tribes were of Scythian, or, at least, of non-Âryan origin. On the irruption of the Âryans, it would naturally happen that the copious and expressive Sanskrit of the conquering race would almost overwhelm the vocabulary of the rude Scythian tongue which was spoken by the aboriginal tribes. Nevertheless, as the grammatical structure of the Scythian tongues possesses peculiar stability and persistency; and as the pre-Âryan tribes, who were probably more numerous than the Âryans, were not annihilated, but only reduced to a dependent position, and eventually, in most instances, incorporated in the Âryan community, the large Sanskrit addition which the Scythian vernaculars received would not necessarily alter their essential structure, or deprive them of the power of influencing and assimilating the speech of the conquering race. According to this theory, the grammatical *structure* of the spoken idioms of Northern India was from the first, and always continued to be, in the main, Scythian; and the change which took place when Sanskrit acquired the predominance, as the Âryans gradually extended their conquests and their colonies, was rather a change of vocabulary than of grammar,—a change not so much in the arrangement and vital spirit as in the *matériel* of the language. This hypothesis seems to have the merit of according better than any other with existing phenomena. Seeing that the Northern vernaculars possess, with the words of the Sanskrit, a grammatical structure which in the main appears to be Scythian, it seems more correct to represent those languages as having a Scythian basis, with a large and almost overwhelming Sanskrit addition, than as having a Sanskrit basis, with a small admixture of a Scythian element.'—p. 38. 'The Scythian substratum of the North-Indian idioms presents a greater number of points of agreement with the Oriental Turkish, or with that Scythian tongue or family of tongues of which the new Persian has been modified, than with any of the Drâvidian languages.'—p. 39.

multifarious languages and nationalities embraced amid the indigenous or intrusive races, who in succession may have peopled portions of that land.

I now insert the type Table of transitions of the Indian Alphabet referred to at page 41. This, like Prinsep's lithographed synopsis, requires but little introductory notice, as it should be sufficiently explanatory in itself, but it may be necessary to mention, that I have modified some of the headings of the earlier alphabets, which I have felt bound to retain unaltered in the artist's copy of Prinsep's original fac-similes.[1]

The derivations of the six leading or epochal series of the general table may ordinarily be gathered from the notices and translations of the original texts of each, inserted in various parts of this publication.[2]

The so-entitled Nerbudda character is taken from a set of copper-plate grants, of uncertain date, found at Seoní in the Saugor and Nerbudda territories;[3] and the Kistna alphabet,

[1] [As the accompanying Table of Alphabets has lately appeared, under a slightly varied form, in the work of another author, it is necessary for me to explain how it comes to be inserted in this place without the usual acknowledgment. My Publisher, in making his preparations for the present reprint, imported, at my request, from Germany, such of the Sanskrit types, based upon Prinsep's originals, as were deemed requisite for the illustration of the Palæographic history of Indian writing. As some difficulties presented themselves, on the arrival of this foreign type, in regard to its justification and assimilation with our own, it was determined to set up the entire table before it was required in the order of the consecutive articles. This was done, and the first rough proof had been submitted to me, when Mr. Austin's managing superintendent intimated that if I had no objection he intended to lend the table for publication in Mr. Monier Williams' Sanskrit Grammar. I of course assented willingly to this arrangement, merely stipulating, in the most distinct manner, for the due acknowledgment of the derivation. I heard nothing further on the subject till the work in question appeared, under the auspices of the Oxford University Press, when I naturally looked for the expected recognition of the use of my materials. However, to my surprise, I could discover no notice whatever of obligations to my publisher or myself. Upon making inquiries, I discovered that there had been some misapprehension as to the terms under which these materials had been permitted to be used; and Mr. Williams assures me that he was not in any way made aware of my interest or concern in the synopsis, and therefore necessarily failed to acknowledge the merely secondary title I claim in its reproduction.]

[2] [No. 1, vol. ii. p. 8, *et seq.* of this publication; No. 2, 'Jour. As. Soc. Beng.,' vol. vi., p. 1042; see also Stevenson, 'Bombay Journal,' July, 1853, and January, 1854; No. 3, Art. xix. *infrâ*; No. 4, vol. i., p. 233; No. 5, vol. i., p. 252; No. 6, vol. i., p. 321.]

[3] [See p. 726 'Jour. As. Soc. Beng.' vol. v. (1836), and also Prof. Wilson on 'Chattisgarh Inscriptions,' 'Asiatic Researches, vol. xv., p. 507.]

which follows, was obtained from inscriptions at Amarávatí in Berár.[1]

For the more modern alphabets, which are arranged irrespective of their relative antiquity, I have had to rely upon such

[1] [Prinsep explains the source from whence he derived the materials for this alphabet in the following remarks:]—'In the library of the Asiatic Society are ten manuscript volumes of drawings of sculpture, images, architecture, and inscriptions, forming part of the celebrated collection of the late Colonel Mackenzie. The greater portion of these are as yet unknown and undescribed. None of the series, as far as we can ascertain, have been published, nor are we aware of any attempt having been made to decipher the inscriptions. It is greatly to be wished that the whole of these interesting documents could be digested in some convenient arrangement and made accessible to the learned world, especially now that the invention of lithography offers a cheap and expeditious means of effecting such an object. We were in hopes of combining their publication in the form of a volume or two of plates, with the digest of the Mackenzie manuscripts, which, at the recommendation of the Society, the Government has lately entrusted to the Rev. W. Taylor at Madras, the author of 'Oriental Historical Manuscripts.' As a specimen of the contents of these curious volumes, Captain Cunningham has kindly favored me with the two lithographs numbered as pls. x. and xi., vol. vi., 'Jour. As. Soc. Beng.' He has selected the two longest inscriptions from the volume, No. 18, entitled 'Antiquities at Amarávatí,' a town in the Berár province, situated on the Kistna river to the west of Nágpur.

'The majority of the sculptures of Amarávatí seem to belong to a magnificent *dehgopa*, or Buddhist shrine; but there is an admixture towards the end of the volume of objects of the linga worship. An accurate map of the town is prefixed, whence it appears that the ruined *dehgopa*, whence the relics are taken, was on a mound of 150 feet diameter, now converted into a tank. It is called Dipaldinna (translated by Colonel Mackenzie 'the mound of lights'), which so resembles the name of a similar place of Buddhist celebrity in Ceylon (Dambadinna), that we imagined, on seeing the inscription from the east side of the gateway, some mistake must have been committed; for on comparing the characters with pl. xxviii. of the 'Jour. As. Soc. Beng.', vol. v., p. 554, their perfect identity with the Ceylonese type of old Nágarí was manifest: indeed the three initial letters appear to form the same word '*mujikè*' .... and the same combination there recognized as '*Mahárája*' .... drew Captain Cunningham's attention while copying the penultimate line of the present inscription.

'The second inscription, occupying the two sides of pl. xi., 'Jour. As. Soc. Beng.,' vol. vi. [the Kistna alphabet], is altogether of a different class, although the book states it to have been procured from the same town, Amarávatí.

'The character has much resemblance to that of some of the cave inscriptions at Mahábalipur and other places to the westward; the essential portion of each letter also assimilates very closely to the alphabets of the Chattisgarh and Seoní inscriptions, and this has served as the key by which I have effected the transcription of the whole.

"It is worthy of remark, that in this alphabet, which we may aptly denominate the Andhra character, from its locality, may be traced the gradual transition from the more simple Devanágarí of Northern India (No. 2 of Allahábád, Gaya and Gujarát) to the complicated or florid writing of the Southern Peninsula. On comparing it with the Hala Kanara, or ancient Karnatic, the letters *n*, *t*, *y*, *r*, *l*, *kh*, *th*, *dh*, *bh*, which may be regarded in some degree as test letters, because they have undergone more variation than others in the modern writing of different provinces, are nearly identical. There is also an incipient loop in the lower line of many of the letters which becomes afterwards more developed in the west and south. The Telinga or Telugu character is one step further removed, but it springs directly from the Hala Kanara, and retains many of the Andhra letters still unchanged, particularly the *dh*

type as chanced to be available, amid which may be found some isolated forms that might stand but indifferently the test of local criticism.—E.T.]

and *th*. In the accompanying plate ('Jour. As. Soc. Beng.,' vol. vi. pl. xii) we have thought it worth while to exhibit these resemblances, and point out the peculiarities noted, that no means may be neglected of facilitating the examination of other inscriptions that may link on naturally at either end of this fragment of the chain of our Indian palæography.'

# XIX.—EXAMINATION OF THE SÁH INSCRIPTION FROM GIRNÁR IN GUJARÁT.

## SANSKRIT INSCRIPTION, No. 1, FROM JUNAGARH.

[ I insert Jas. Prinsep's translation of the Sáh inscription at Girnár as it originally appeared in the 'Jour. As. Soc. Bengal'—notwithstanding that it has to a certain extent been superseded in the acquisition of more perfect copies of the monumental writing than he was constrained to rely upon—in order both to complete the record of his contributions to an important section of Indian Numismatics, and to serve as a needful introduction to his notes in illustration of the subject, which retain, with but limited exceptions, their pristine value!—E. T.]

After the announcement made in the proceedings of the Society, that the Governor-General has acceded to my request, for the deputation of an officer to take exact facsimiles of the several inscriptions in Gujarát, which have turned out to be of so important a nature, it may seem premature or superfluous to continue the publication of the analysis of the less perfect document now in my hands. But it is only in a few uncertain passages that the expected corrections are desired. The body of the matter is sufficiently intelligible, both in the Pálí edicts of Girnár, lately published, and in the Sanskrit inscription from Junagarh, which I have chosen for the subject of my present notice.

I should, indeed, be doing an injustice to Capt. Laing, who executed the cloth facsimile for the President of the Bombay Literary Society, and to Dr. Wilson himself, who so graciously placed it at my disposal, when, doubtless, he might with little trouble have succeeded himself in interpreting it much better than I can do, from his well-known proficiency in the Sanskrit language; it would, I say, be an injustice to them were I to withhold the publication of what is already prepared for the press, which may be looked upon as their property and their discovery, and to mix it with what may hereafter be obtained by a more accurate survey of the spot.

Before, however, proceeding to the inscription itself, I insert Dr. Wilson's account of the site.

'The rock containing the inscriptions, it should be observed, is about a mile to the eastward of Junágad, and about four miles from the base of Girnár, which is in the same direction. It marks, I should think, the extremity of the Maryádá of the sacred mountain. The Jainas, as the successors of the Bauddhas, greatly honour it.'

The rock or large stone above alluded to, appears to contain all three inscriptions. On the eastern side facing the Girnár hill are the edicts of Asoka in the old character; on the western side, the Sanskrit inscription which I have selected as my theme for the present occasion; and on the southern side a third inscription, longer even than either of the others, but somewhat more modern, and less distinct.

The western inscription, then, is near the top of the stone;—it covers a surface of ten feet and a half in breadth, by five feet in height. The stone is a good deal cut or worn away in two places, but it does not seem that anything has been lost on the outer edges, the

irregularities there visible proceeding from the contour of the stone. Capt. Laing's facsimile is lithographed on a very reduced scale in the 'Jour. As. Soc. Beng.,' vol. vii., pl. xv.

The character is only one remove from the Buddhist alphabet of Girnár. It has the same mode of applying the vowel marks *e*, *a*, and *o*, in particular to those excellent test letters, *n*, *ṇ*, and *m*. The vowel *i* is still formed of the three dots; but I need not more fully dilate upon its peculiarities, since I have already inserted the whole alphabet, as No. 3 of the comparative table [Pls. xxxviii., xxxix.] A few, also, of the principal passages are now subjoined on a larger scale in pl. xix., 'Jour. As. Soc. Beng.,' vol. vii., as upon them rests the value with which this inscription will, doubtless, be regarded in Europe as well as in India, on account of the historical information it is calculated to afford.

Once transcribed into modern Nágarí a Sanskrit inscription becomes easily intelligible through the aid of a skilful pandit. In the present instance, it has only been necessary to change two or three dubious letters to enable Kamalákánta to explain to me the contents of all the continuous passages which still exist on the stone, and it is fortunately not very difficult to imagine from the context what must have occupied most of the spaces now eroded or mutilated.

TRANSLATION OF THE GIRNÁR BRIDGE INSCRIPTION (APRIL, 1838).

(Be it) accomplished![1] This very impassable bank at the foot of the hill city (Girinagara[2]). . . . . (15 syllables) with wide expansion and with great

[1] The same invocation, *siddham*, is used in the Skandagupta inscription, pl. i.

[2] The vowels of the word Girinagar are wanting, but the name cannot be mistaken, being modern Girnár.

depth of strong masonry,[1] carried all along the bottom of the said hill, filling up the interstices or irregularities in even layers, up to the height of the bank ..... (30) ..... by a chosen (architect?) the foundations of the bridge being completed most substantially, by embanking off in various ways the water ..... (50) ..... by workmen cheered on by kindnesses, and with a vast abundance of materials, was in progress. Then the work continued under favor of the Rájá Mahákshatrapa (the great patron of the warrior class), who was named Swámi Chastána ..... (and was completed) in the seventy-second year of his son, the Kshatrapa, mindful of the lessons of his instructors, the rájá named Aridámá,[2] in the dark half of the month of Márgairsha ..... (afterwards) by an immense inundation, brought on by heavy rains, converting the whole surface of the earth into an ocean, and making a mass of mud of the hill of Urjayata (?)— .... by the tempestuous waves of the Paleşinî river, and its several tributaries, the bridge ..... (was carried away. Subsequently) ..... in conformity with the original design, (it was) repaired with blocks of stone from the hill, remedying the difficulties of the passage way with numerous long beams and trees laid across,—and skilfully uniting them ..... (A second time) by the force of the waves, in a fierce hurricane and flood, (it was) broken down and much damaged, ..... (after which), with stones and trees and piles,[3] and massive beams[4] stretched across, it was again put into complete repair, with an indestructible embankment, having a length of 400 cubits, and in like manner having a breadth of 75 cubits, in a wonderful manner taking out all the water, and laying dry the bed of the river[5] ..... by Pupya Gupta, the territorial treasurer of Rája Chandragupta Maurya, (this) was caused to be done: and by the *Yavana* rája of Asoka Maurya, (named) Tushaspa, it was ornamented with cornice and parapet, and with an artificial canal visible there, over which the bridge also extended, in a manner worthy of the approval of the rájá. ..... (Afterwards) by him, who, being predestined from the womb to the unceasing and increasing possession of the fortunes of royalty, was invited by all classes waiting upon him for the security of their property—to be their king:—who, from clear intelligence, has not suffered the sacrifice of animal life;—who is faithful to his promises—who is courteous in speech—who in battle, opposed face to face with an equal antagonist, and threatening to discharge his weapons, compassionates his yielding foe ..... who gives hope to those of their own accord repairing to him to beseech for succour ..... preserving the ancient customs of the town unin-

[1] सन्धि बन्धि, the joining or cementation of masonry, is now called by a similar name *jorái*. I suppose the piers or foundations to be intended.

[2] नाम्नररिदाम्न (sic)—if this is correctly traced, it contains a grammatical error, in the substitution of र् for : after न. The name might be read *Atri*; or *Rudra*, were the preceding word *namno*. The date may be read either *varshe dwisaptatita* (*me*) followed by numerals,—or *Ari damni nashte dwisaptati vatsare*, in the 72nd year after the death of Aridámá. As there is a space after *dwi*, *sata* may be also supplied, making the date 270.

[3] अनुतल्पद्वारशरण, the introduction of *Dwára* here is hardly intelligible, perhaps we should read *anutalpát vári sarana uchchraya vidhansiná*—the remover of the impediments to the flow of the current from the beams and materials that had fallen into the river.

[4] गुल्मलता—the distinction of *golas* and *lattas* in the modern wood market is, that the former are unsquared, and the latter, squared timbers.

[5] I have given to this obscure passage the best sense in which I think it explicable, as the breadth, 75 cubits, could hardly have been that of the bridge itself.

fringed by the proud and insolent;—who is lord of the countries[1] of Avanti, Anupa (?) Vrija, Anartta, Surashtra ..... Savara, Kukára, Kiráta, Tishat, and others, all conquered by his own might, and maintained in their former prosperity, and all their inhabitants, both high and low, converted into obedient subjects—all these countries, under his majesty (forming one empire), and furnishing every object of desire and gratification: who is the powerful leader of an army obeying him fondly as one born with the title of a renowned hero;—who, after more than one conquest of Sátkarni, the king of Dakshinapatha, by merely a threat (of attack), concluded a peace (with him) for the security and protection of his country ..... and again set up his royal banner;—who has a natural taste for exercising and improving the strength of his hand, according to the rules[2];—who is renowned for his skill in the practice of all the celebrated sciences, of grammar, of polity, of singing, of expedients (mechanics?) and the rest, the theory of which he has gone through, and tolerably retained;—who, powerful in horses, elephants, chariots, oxen, weapons, and armour ..... exceedingly clever in breaking down the strongholds[3] of his enemies;—who is every day happy in the bestowal of alms and mercy;—who is affable in manners;—whose treasury is abundantly filled with gold, silver, tin, and the lapis lazuli jewel, brought as tokens of his greatness, offered to him as his just and proper measure of tribute; who (understands) the precise etiquette of (courtly terms), their sense, measure, sweetness, rarity ..... who is of correct bodily proportion, excellent in gait, color, vigour, and strength, &c.; in form and limb of most auspicious aspect;—who, of his own (merit?), has the title of 'patron of warriors and king of men;'—who is crowned with the garland[4] of flowers won in the Swayamvara ceremony (or tournament);—by this great patron of the warriors (or Satrap) Rudra Dámá ..... zealous for the increase of his religious fame, and in kindness and compassion for females, and the lame and sick: and with a most liberal expenditure from his own treasury (for the people?);—consenting at once to the petition of the chief citizens;—the construction of this bridge with threefold strength, ..... after due inspection, was ordered to be done;—thus:

By the dignified in virtue, the chief minister of the great Satrap ..... the road was also lined with trees, conferring pleasure (on the passers by).

Further, by him who, out of favor to the inhabitants of town and country, restored with substantial repairs the excellent condition (of the bridge) to the good subjects of this metropolis,—who made it impregnable to the torrents of water ..... .....? by the descendant of the Pahlaván tribe, Mavya, the contractor, who has finished his work precisely on the terms of his estimates and plans, so as to give

[1] Most of the countries enumerated here are to be found in the Puránas. Avanti is well known as Oujein; Vrija is the country about Mathura; Anartta is mentioned with Comboja, Sindhu, and Yavana Márgána ('As. Res.' viii. 339, 341), and is therefore probably in the Panjáb:—Kukura is enumerated in the same list with Benares; Savara is called a wild tribe in the south-east. There are three Kirátas named—two (Chandra and Rajya) in the north-east, and one in the south (pp. 339-41) Tishat may perhaps be read Toshali in Katak, of which more hereafter.

[2] By inadvertence, I have omitted the repetition of the word *arjita* छ्हार्जितार्जित at the beginning of the 13th line in the lithograph.

[3] Reading परबलालय, but the text may be read बललय making it 'destroying his enemy's force,' or again it may be परबलालाघवेसौष्टवक्रियेन, well skilled in diminishing the power of his enemies. (The Nágarí transcript has been altered thus.)

[4] In former times, Hindú maidens chose their favourite among a band of suitors by throwing a garland over his neck. A play on the name *Dámá* is intended.

satisfaction,—the strong man and overcomer of difficulties, surrounded by his overseers (*pattis*),—by him, the establisher of religious fame, and the increaser of the glory of his master, was this work executed." [1]

## OBSERVATIONS.

I have already remarked, that in this inscription, for the first time, we find the name of the great Chandra Gupta, the contemporary of Alexander, recorded on a genuine monument of antiquity. There can be no doubt of his identity, because his family name Maurya is added; and further, the name of his grandson, the no less famous Asoka, immediately follows, designated also by the same family cognomen of Maurya.

On first discovering this important fact, and perusing the mutilated fragment with Kamalákánta pandit, as well as we could make it out, I thought myself in possession of a record of the time at least of Asoka, by whose deputy or viceroy the bridge seemed to have been completed. The long string of complimentary epithets which fill up the bulk of the inscription being in the instrumental case, and thus agreeing with the *Yavana rájena* of the upper sentence.

This turns out not to be precisely the case. A considerable period is embraced in the history of the Girnár bridge, partly anterior and partly subsequent to the time of Chandra Gupta;—thus it seems originally to have been erected by a Prince named Swámi Chashtána, a name rather Persian than Indian;—it was then either repaired

[1] *Anushthitam* अनुष्ठितं, accomplished. The same word is used at the foot of the Allahábád inscription—(vol. vi. 978). But I know not how it there eluded the apprehension of the pandit who made me write in lieu of it अवस्थितं 'remaining firm or fixed.'

or more probably completed by his son Aridámá or Atridámá in the month of *Márgasírsha* or *Agrahayana*, in the year 72, but the letters which follow are unfortunately illegible, and we are left in the dark as to the era then in use for recording events.

The bridge was then totally destroyed by an inundation of the river Paleshini, a name I cannot discover in the map of Gujarát. Thus temporarily repaired, perhaps by the inhabitants, it was again carried away; and a more thorough reparation was commenced under orders from Chandra Gupta Maurya, by his prefect of the province, Pupya Gupta, and completed in the reign of Asoka, his grandson, thirty or forty years afterwards, by his Greek officer, for so I think we may understand *Yavana rája*. The brahmanical population of the distant province of Suráshtra probably had but little affection for the Buddhist monarch, who is not even honoured in the inscription with the title of rája, being simply styled Asoka the Maurya! The name of his Greek employè is not very plain on the cloth; it may be read तुषस्पेन—'by *Tushaspa*,' a name evidently of Persian termination, like *Gushtasp*, *Lohrasp*, etc., from *asp*, 'a horse' (Sans. *asva*). Were the name written *Tushasva*, we might have supposed it a translation of the Greek name Philippos, having precisely the same meaning; and we might have argued that some adventurer having, from his military prowess, obtained service under Asoka, had added those new provinces to his empire, which we find noticed in his religious edicts, and had at length usurped a considerable share of power to himself; being, in fact, the very *Yona* rája whom the Muhammadan historians state to have

dispossessed Sinsar Chand's grandson. But I am sensible that I have been frequently guilty of running ahead of prudence with my deductions, and I must consequently draw in a little; for it may be possible, after all, that the word *yavana* does not exist. It is preceded by the letter त, which I have rendered तु, 'further,' 'too;' but the expletive is somewhat out of place, and some may prefer the reading अशोकस्य तोयवनराजेन, 'by Asoka's rája (or lord) of the floods and forests.'

To continue my history of the bridge:—after the last repairs, although no accident is mentioned, we must conclude that such had occurred, and that the bridge was rebuilt by the prince upon whom the largest share of the eulogistic inscription is lavished. The opening passage may perhaps be recoverable on a careful re-examination of the stone. Towards the close, it does indeed mention that on the petition of the inhabitants (backed by female influence?) he strengthened the structure three-fold at his own expense. Now the name of this prince is Rudradámá, destined, it says, from his cradle to be elected to the throne,—his title is Rája Mahá Kshatrapa, the same as that of Aridámá and Swámi Chashtán. We may therefore view him as a scion of the old dynasty, replaced on the throne after a temporary subjugation of the province by the Maurya sovereigns of India proper.

It is curious, and most interesting to those whose attention is engaged in the subject, to observe how different ancient monuments throw light upon one another, and help to their mutual development. The name of Rudradámá recals to our memory the series of Surashtra coins

described in my journal hardly a year ago. Among the eleven names there distinguished, Rudradámá was conspicuous as following just such a break in the line as would be made by the cause above alluded to. Again, the title then read as Mahá Kritrima, the elected king, on second examination agrees precisely with the present more palpably developed Mahá Kshatrapa. On referring to the plate of Mr. Steuart's coins, sent to me by Capt. Harkness, I find that I so read the word at first, and noted it in pencil, but gave it up on the pandit's ignorance of such having ever been a title in use. Had I possessed at that time a comparative alphabet to consult, I should immediately have perceived that the right hand twist at the foot of the *k* did not *then* denote as it does now the vowel *rĭ*, which was formerly turned in the contrary sense; but that it was the cerebral *sh* subjoined to the *k* (forming *ksh*), exactly as it occurs on the Junagarh[1] inscription. The *p* also deceived me, being more pointed than the same letter in the word *putra*; but on examination of the coins in my possession, I find it generally rounded off as U, and never crossed below as the *m*.

The word क्षत्रप: *kshatrapas*, although wholly unknown as a sovereign title to modern Hindús, and not to be found in their books, is familiar to the reader of the Grecian history of ancient Persia, with merely a softening of the initial letter, as ΣΑΤΡΑΠΗΣ, *Satrapa*, the prefect of a province under the Persian system of government. I do not believe that the etymology of this name has ever

[1] I have before remarked that this town seems called after the Greek prince, Yavanagaḍa.

been traced. It is called a Persian title, but the Persian dictionaries only contain ستراپ *Satrab*, as an obsolete term for the governor of a province, without explanation of its origin. In Sanskrit it signifies the ruler, feeder, or patron of the *kshatra* or military class; and now that we know the ancient language of Persia east of the Euphrates to have been a near dialect of the Sanskrit, we may conclude that Satrapa had the same signification in Ariana. It is not for me in this place to speculate on the purport of the term in the Persian polity, but it is a fact well known that the effeminate Persians at a very early period were in the habit of governing their numerous tributary provinces by mercenary troops. The same system, and the same denomination of Satrap, was adopted and retained by the Macedonian conqueror, both when Greek and native officers were employed: and instances are frequent enough of the Satraps assuming to themselves independence and a regal title.

The Satrapies of the ancient Persian monarchy are not supposed to have extended across the Indus. If, in Alexander's time, this limit was first transgressed, it was not long before the Bactrian Greeks, or the Parthians, made themselves masters of Sindh, Katch, and Gujarát.[1] The present inscription may incline the learned to conclude that Suráshtra was before then one of the Satrapies of the empire, from the name of Chastan, the Satrap, who is stated to have first erected the bridge, and who must have preceded Chandragupta. Rudra, Viswa, and others of the list are more Indian in sound. It is remarkable

[1] See 'Jour. As. Soc. Beng.,' vol. vi., p. 385, for Vincent's authority on this subject.

that in the long string of epithets applied even to Rudradámá, the chosen Satrap, there is none which bears the slightest allusion to Hindú mythology; while, on the other hand, the coins of the whole dynasty bear an emblem which we have hitherto considered either of Mithraic or of Buddhist import. The name Jinadámá (wearing Buddha as a necklace) is decidedly Buddhistic; and the epithet applied in the inscription to Rudradámá, —'who, from right persuasion, never put any living creature to death,'—proves that Rudra's opinions were at any rate influenced by the proximity of the important Buddhist establishment at Girnár.

The style of prose eulogy employed by the composer of the inscription puts us much in mind of our old friend, the Allahábád column. It has its corresponding list of countries conquered and equitably ruled; but few of the names are, as might be expected, the same in the two. Avanti or Ujjayani, and Vrija (if the latter name be correctly read) are of the most importance as implying that the elected kings of the Sáh family, or the Satraps of Suráshtra, as we may now more properly call them, had acquired dominion over all the central portion of India, driving back the Magadha sovereigns (who had previously spread their hands to the farthest west), into their own Gangetic limits. The other places, Anartta, Kukura, etc., are probably provinces to the northwest, out of India proper. One other name, however, deserves our particular attention, the king of the Dakhan (Dakshinapatha), who was twice threatened with an invasion, and brought to sue for peace. His name is Sátakarni, the same which occurs several times in the lists of the

Andhra kings extracted by Wilford from the Bhágavat and other Puránas. It is a patronymic, from शतकर्णि, 'the hundred eared,' which was, doubtless, the name of the founder of the family; and Sátakarni was probably the surname of all the line, though not repeated everywhere in the versified enumeration of the Puránas.

The locality of the Andhra dominion has hitherto been as uncertain as the period of its sway. Wilford says in one place that the Andhra princes 'made a most conspicuous figure on the banks of the Ganges for above 800 years;'[1] again, that Andhra and Koshala (near Kalinga) are used synonymously by some Hindú authors: again, that Srí Carna-deva took the title of king of Trikalinga, or of the three shores, to the east and west and south of India.[2] From our inscription we perceive that the general term of Dakshinapatha agrees well with the latter definition, and we may rest content with denoting the Sátakarnis as kings of the Peninsula.

Further, as to their age, we find one of the name contemporary with Rudradámá who followed Asoka (we cannot say at what precise distance). Wilford brings them much lower down, from the third to the sixth century after Christ, in order to square the last of their name, Pulomarchi, or Puliman, with the Pulomien[3] of the Chinese.

He is forced to confess, however, that there were Andhras at the beginning of the Christian era, when, says Pliny, 'the Andaræ kings were very powerful in

[1] 'Asiatic Researches,' vol. ix. p. 101. [2] Ibid, p. 104.
[3] Quere. Is not Brahman written with this orthography in Chinese?

India, having no less than thirty fortified cities, an army of 100,000 men and 1000 elephants.[1]

We must, therefore, consent to throw back the Andhras; and, instead of requiring them to fall into a general and single line of paramount Indian kings, as Wilford would insist, let them run in a parallel line, along with the lines of Suráshtra, Ujjain, Magadha, and others, individuals of each line in turn obtaining by their talent, prowess, or good fortune, a temporary ascendancy over their neighbours: thus at length we may hope to fulfil Capt. Tod's prophecy,—'let us master the characters on the columns of Indrapreshta, Prayag, and Mewar, on the rocks of Junagarh, at Bijollie on the Aravulli, and in the Jain temples scattered over India, and then we shall be able to arrive at just and satisfactory conclusions (in regard to Indian history)."[2]

[Prof. H. H. Wilson has most obligingly favored me with the subjoined revised translation of the interesting monumental record which forms the subject of the preceding remarks. The text upon which the interpretation is based is derived from an independent Devanágarí transcript of the original, I had prepared with much care from the improved fac-simile of Messrs. Westergaard and Jacob, published in the Journal of the Bombay Branch Roy. As. Soc. for April, 1842. Prof. Wilson has of course referred to the amended lithographed transcript of this

[1] The name Sáragan, given in the Periplus as of a sovereign that had *formerly* reigned at Kalliena (near Bombay), has some resemblance to Sátakarni; but I will not build upon such uncertain ground.

[2] Tod's 'Rájasthán,' i. 45: he gives a curious derivation, by the way, of the name of Junagarh:—"The 'ancient city,' *par éminence*, is the only name this old capital, at the foot of, and guarding, the sacred mount Girnár, is known by. Abul Fazl says it had long remained desolate and unknown, and was discovered by mere accident. Tradition even being silent, they give it the emphatic name of *Juna*, 'old,' *gurh*, 'fortress.' I have little doubt that it is the Asildurga or Asilgurh of the Grahilote annals, where it is said that prince Asil raised a fortress, called after him, near to Girnár, by the consent of the Dabi prince, his uncle."

writing, and verified my doubtful readings. His Sanskrit text and commentaries will be reserved for separate publication, in the 'Jour. Roy. As. Soc.' The matured result is all that I need desire to present to my readers.—E. T.]

REVISED TRANSLATION OF THE SÁH INSCRIPTION ON THE GIRNÁR ROCK.

(1). This perfect, delightful, beautiful (causeway?) from Girinagar to the foot of . . . . . (was constructed) of . . . . stone (and in) breadth, length, and height, was firmly built as a public road . . . . . along the skirt of the mountain . . . . . Emulous[1] . . . . formed . . . .

(2). . . . . , . . . . by that artificial causeway, and still renowned.

(3 and 4). . . . . remains in a great heap . . . then this . . . in the year two (and) seventy (?) of the royal Mahahshatrapa[2] Rudra Daman, whose name is repeated by the venerable, the son of the royal Mahahshatrapa, of well selected name, Swami Chandana.[3]

(5). In the dark half of Marga Sirsha, the earth was converted as it were into a sea, by heavily raining Panjanyu, so that the golden sand of the mountain (was washed away?).

(6). And by the exceeding violent currents of the Palesini, and other rivers, destroying, as if at the end of the world, all that sought an asylum, even on the highest parts of the hill, as well as along the skirt, and bringing down the trees from the peak, the causeway (was broken down?).

(7). And this being accompanied by a terrible strong wind, the water rushed down like a cataract, sweeping away the stones, trees, shrubs, creepers, along the river, by (whose joint efforts) four hundred cubits (were thrown down). . . . . .

(8). And seventy cubits (more) broken by the torrent . . . . . was caused to be made by Pushpagupta, the chief artificer[4] of the Maurya King Chandragupta, by Tushasyenu, the Yavana rája . . . . . of Asoka, the Maurya, through good fortune was adorned[5] . . . . . through that restoration, the rája (announced) to all castes having come to see the causeway, for their security, that by him discontinuance was made of putting men to death, by expelling the breath of life.

(10). By observing this engagement, he (overcame all enemies, and extended his rule) over many well affected countries, conquered by his prowess.

(11). Both in the east and west, as . . . . . avanti . . . . . anartta Surashtra . . . kukkura Aparaúta, and all the nishadas.

(12). Having repeatedly overcome Sátakarni, the lord of the South, he concluded an alliance (with him?).

[1] Apparently alluding to the Selubandha of Rama, to which that of Girinagar is compared.

[2] Rájno Mahahshatrapa may also mean 'the great Satrap of the King.'

[3] But there is room left, by defects in the inscription, for one or more names between Rudra Daman and Swami Chandana.

[4] The words are Sashti Yagusyena, possibly for Sreshtiya Gusyena, or the last may be intended for Guptena, as if there was a Sashtigupta after Chandragupta.

[5] The inscription records the repair of the causeway by Rudra Dama. Here, apparently, it relates its having been built by some officer, or by the successor of Chandragupta; and repaired or beautified by the Yavana rája (?) in the time of Asoka.

As an atonement for leading my readers into this long digression, I now present them with an engraved plate of all the varieties of the Suráshtra group of coins yet found. There is one new name added through the diligence of Lieut. E. Conolly. The rest are already known; but I subjoin their corrected readings for the satisfaction of my numismatical friends. The fact of their having a Grecian legend and head on the obverse is now explained, and the date of their fabrication is determined so far that we may place some of the early reigns in the second and third centuries before Christ: to what later period they descend we may also hope to ascertain through the means of other coins which will come to be described along with the third inscription from Junagarh, as soon as we obtain a correct facsimile of it. I may here so far satisfy curiosity, as to state that this third inscription,—the longest, and in some respects the best preserved, though from the smallness and rudeness of the letters it is very difficult to decipher,—is in a more modern character, that allotted to the third century after Christ, or the Gupta alphabet; and that in the opening lines I find an allusion to Skanda Gupta, one of the Gupta family, whose name has also been found upon a new series of the Suráshtra coins. The words are ..... कीर्त्ति विगुण नृपतिः स्कन्दगुप्तः पृथुश्रीः चतुर..... (Vide 'Jour. As. Soc. Beng.,' vol. vii., pl. xix., and vol. i. *ante*, p. 247).

We shall thus be able to string together by means of the inscriptions and coins of ancient Suráshtra a continued series of names and *dates* from the time of the Maurya dynasty to that of the Gupta dynasty of Kanauj, which terminates the catalogues of the Puránas.

*Dates*, too, did I say? Yes, I am in hopes of adding even actual dates to the series, for I have been fortunate enough to light upon a clue to the ancient forms of the Sanskrit numerals, and to discover their presence on the very series of Suráshtrian coins to which I have been just alluding. But here again I must solicit a little patience while I describe the grounds of this new assertion.

## ON THE ANCIENT SANSKRIT NUMERALS.

The most ancient mode of denoting number in the Sanskrit languages, as in the Greek and Latin, was by the use of letters in alphabetical order. This system we find prevalent in all ancient Sanskrit works, as well as in the Pálí, the Tibetan, and other derivate systems. There do not, indeed, appear to be any numerals peculiar to the Pálí. In their sacred records the words are always written at length; they have also the symbolical words of the Sanskrit astronomical works, and what is called the *Varna sankhya*, or numeral classification of the alphabet. The numerals now employed in Ceylon, Ava, Cambodia, Siam, have hardly the slightest affinity to one another.

When this system was exchanged for that of the decimal or cipher notation does not appear to be known, or to have been investigated by the learned. Up to the ninth or tenth century of our era, the Nágari numerals extant on numerous monuments do not differ materially from those now in use.

In the Gupta class of inscriptions, as far as I know, no numerals had as yet been found until I noticed

some doubtful and unknown symbols on the Bhilsa monument. In the Buddhist pillar inscriptions the dates where they occurred were uniformly expressed at full length.

A few months ago I was engaged in transcribing and reading with my pandit some copper-plate grants supposed to be of the third century, found in Gujarát by Dr. Burn, whose beautiful copies of them I hope shortly to make public. In one of these, the date was entered at full in the words संवत्सरे शतत्रयेचतुर्न्नवत्यधि के 'in the *samvat* year three hundred and ninety-four.' A few lines below this the word ॥ संवत्सर ॥ again occurred, followed by three symbols,[1] *d*, *m*, *f*, which must, of course, be numerals: they are more exactly copied in pl. xl., and, according to the preceding statement, should be 394.

On a second plate in the same manner, the date in words was संवत्सर शत त्रयेशित्यधिके कार्त्तिक शुद्धपञ्चदश्यां, 'in the 15th of Kartik, *samvat* 380,' and in figures सं, *d*, *l*, कार्त्तिक शु

On a third plate the date in words was शतत्रयपञ्चाशित्यधिके कार्त्तिक पौर्न्नमास्यि, 'Kartik full moon, *samvat* 385,' and in figures *d*, *l*, *i*, and *o*, *i*, as before: in both of which the same symbols occur for 1, 3, 8, and 5; and the latter figure, much resembling the ancient letter *na*, but slightly altered, was again observed on a fourth plate sent me by Dr. Burn, from Gujarát, which did not contain the date in words, thus, सं, *d*, *k*, *h*.

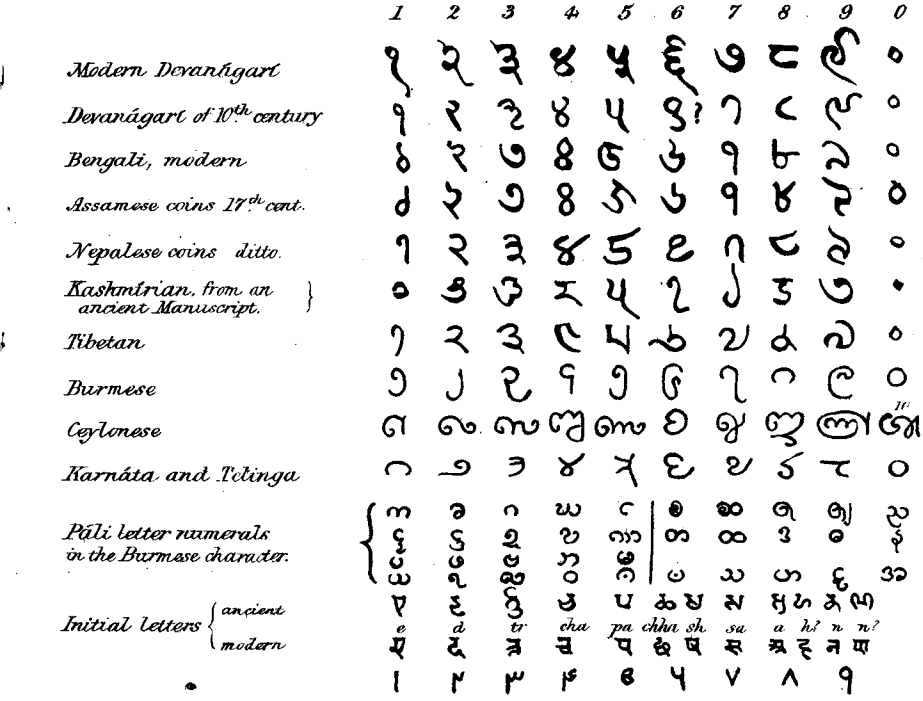
[1] [In the original text of the 'Jour. As. Soc. Beng.,' fac-similes of these numerals are inserted in each place; as these are repeated in full in Prinsep's own Plates No. xl. of the present series, and are re-copied and classified in my supplemental Lithograph, pl. xl. *a*, I have not thought it necessary to have these types re-cut, but have supplied their places by italic letters, whose several correspondents are duly defined in the new transcript of pl. xl. *a*.]

Much pleased with this new train of discovery, I turned to Mr. Wathen's paper in the fourth volume of the Journal, in which I remembered his interpretation of the date on a similar grant by Srí Dhara Sena, as being in the ninth year of the *Valabhi Samvat* of Tod, corresponding with A.D. 328. Here the translator had no written entry to guide him, nor had he any clue whereby to recognize the numerals which followed the abbreviated *Samvat*, thus, *d*, *c*, which we now perceive to be 300, + some unknown unit. I immediately wrote to Mr. Wathen and to Dr. Burn, requesting them to examine carefully the dates of all other plates in their possession, and from them in return I received all the examples which are inserted in plate xl. From the whole series combined, we may venture to assign a certain value to the 1, the 3, the 4, the 5, the 8, and the 9.

The last of these, I could not but remember as the symbol on one of the Bhilsa inscriptions, which led to so many conjectures a year ago. In the form of ⊕ we have evidently our *m*, or the year 9, but the three strokes at the side would appear to modify its value, or to be themselves a numeral, perhaps the *o*. Then, as we find the preceding *k* has not a dot above it, we may use that also as a numeral, and understand the whole *k*, *m*, ≡ as 2 or 6, or 790 according to the value to be hereafter assigned to *k*.

Again, in the second Bhilsa inscription ('Jour. As. Soc. Beng.,' vol. vi., p. 458, pl. xxvi.), the fig. 3, with another, is perceived following the word सम्वत्, and the last letter may possibly be a numeral also. In Mr. Ommanney's Multai inscription, two numerals of the

# Sanskrit Numerals.


1 2 3 4 5 6 7 8 9 0
Modern Devanágarí
Devanágarí of 10th century
Bengali, modern
Assamese coins 17th cent.
Nepalese coins ditto.
Kashmírian, from an ancient Manuscript.
Tibetan
Burmese
Ceylonese
Karnáta and Telinga
Páli letter numerals in the Burmese character.
Initial letters ancient
modern
a i u ri li e ai o au k
a i u ri li e ai o au k
kh g gh ṅ c chha j jha ñ ṭ
kh g gh ṅ cha j jha ñ ṭ
ṭh ḍ ḍh ṇ t th d dh n p
ṭh ḍ ḍh ṇ ta tha da dha na pa
ph b bh m y r l v ś ṣ s h
pha ba bha ma ya ra la va śa ṣa sa ha
e d tr cha pa chha sh sa a h? n n?
1 2 3 4 6 4 7 8 9

## Ancient Numerals on Copper-plate Grants.

No 1. Kaira, Dr Burn. in words, (samvat 394.)
repeated in figures

No 2. In words and figures (380) — No 3. (385)

No 4. Do only in figures — No 5, d.o J.A.S.IV. 477.

No 6. Do — Samvat 375? or 30 ardha pausha

Bhilsa Inscription No 7. J.A.S.VI. 454 or samvat — 79? Bhádrapada di. 5

Do No 8, second, loss perfect.

## Numerals on the Satrap Coins of Surashtra.

Silver coins, 9 10 11 12 13

Copper do. 13 (Stacy) 14 (Conolly)

Lead do. many without date as

ANCIENT NUMERALS restored

after J. Prinsep.

W. West. Lith

The Wood-cut by Stebbing, Austin, Hertford

same class were observed ('Jour. As. Soc. Beng.,' vol. vi., p. 869.)

It may also be remembered that in my notice of the Suráshtra coins (vol. i, p. 433), I remarked behind the head on the obverse, besides a legend in corrupted Greek characters, a few strange marks, not at all like either Greek or Sanskrit alphabetical characters; to these I now re-directed my attention, and was happy to perceive that they too were in fact numerals of the same forms, and of equal variety with those on the copper-plate grants.

I have arranged at the foot of pl. xl. those specimens in my own cabinet, on which the figures are best developed.

Upon bringing the subject to the notice of Dr. Burn, at Kaira, he wrote me that he had already remarked these symbols on another very numerous class of old coins, found in the ruins of the Gujarát towns. They are made of lead or tin; and have on one side, in general, a bull, and, on the other, the triple pyramid which forms the central symbol of the silver hemidrachmas of the Suráshtra satraps. I have not found space to introduce them into the present plate, but fig. 22, pl. xxxvii. will serve as a representative of the whole class. It is a finely preserved copper coin, most opportunely discovered and presented to me by Lieut. E. Conolly, from Ujein. It bears the numerical symbols *d*, *k*, very distinctly marked under the Chaitya symbol. Among the facsimiles of the leaden coins, I find *d*, *l*, :, and *d*, *m*, :, with barely room for a third figure, but in one the reading is *d*, *j*, *g*, so that we may venture to

place them all in the fourth century of some yet unknown era.

Among the silver coins the variety is greater: fig. 23, which I find by the reverses is a coin of Rudra Sáh, has the year *d*, *l*, *h*.

Another, fig. 26, also of Rudra Sáh, has the third figure well developed *d*, *l*, *a*.

Fig. 24, of the son of Rudra Dámá (the repairer of the Girnár bridge), has apparently the numbers, *d*, *m*, :, or 390.

Fig. 12, from Ujein, Rudra Sáh II. has *d*, *d*, *b*, the first three rather faint. In a coin of Viswa Sáh, given to me by Mr. Wathen, similar to fig. 9, of the plate, the date is *d*, *b*, *g*.

Fig. 25, is a well brought out date *d*, *j*, :, on a coin of Atri Dámá, son of Rudra Sáh, in my cabinet: the coins of the same prince in Mr. Steuart's plate, and one also of Aga Dámá shew traces of the same second figure.

Now, although the succession of the Satraps, or Sáh family, as given in volume i., p. 429, rests but on slender evidence in some points; still, where the names of father and son are consecutive, we may rest with confidence on it in fixing the priority of such of our newly found numerals as occur on them respectively.

We must, for the sake of perspicuity, repeat the list, with the addition of the dates as far as we have traced them:

REGAL SATRAPS OF SURÁSHTRA.

1 K. Rudra Sáh, son of a private individual, Swámi Jina Dámá.
2 K. Aga Dámá, his son.
(Here the connection is broken.)
3 MK. Dámá Sáh (no coins.)

4 MK. Vijaya Sáh, son of Dámá Sáh.
5 K. Vira Dámá, son of Dámá Sáh.
6 MK. Rudra Sáh, son of Vira Dámá, *Samvat, b, (?) l, a,* and *d, a, :.*
7 K. Viswa Sáh, another son of Vira Dámá ditto *d, b, g.*
8 K. Rudra Sáh, son of M.K. Rudra Sáh, ditto *d, d, b.*
9 MK. Atri Dámá, son of M. K. Rudra Sáh ditto *d, j, :.*
10 MK. Viswa Sáh, son of Atri Dámá.
(Here the connection is broken.)
11 MK. Swámi Rudra Dámá (no coins.)
12 MK. Swámi Rudra Sáh, his son, *Samvat, d, l, h,* and *d, m, :'.*

The two last names being insulated from the rest, were on the former occasion placed by me before Dámá Sáh, because the form of the letter *j* seemed of the earlier type. Since, then, I have learnt that the turning up of the central stroke of the *j* constitutes a vowel inflection. I now, therefore, bring the two Swámis to the foot of the list, on the plea that all figures must have precedence of the 9 or *m*. In the same manner we may now argue that *b* precedes *d*, this figure *j*, and the latter again *l*.

To aid in prosecuting my inquiry, I begged Kamalákánta to point out any allusions to the forms of the ancient numerals he might have met with in grammars or other works; but he could produce but very few instances to the point. One of these is to be met with in the *Kâtantra Vyakarana*, a work of Belála Sena's time, where the conformation of the four is alluded to in these words,

स्तन युगाकृतिश्चतुरङ्को विसर्गश्च

Like a woman's breast is the figure four, and like the visarga;

and the visarga is further explained by a passage in the *Tantrâ-bhidhâna*, a more modern work still, dated in 1460 *Saka*.

द्विठः स्वाहानलप्रिया ठकारेणवर्णसाम्यात् विसर्ग

The name of visarga is 'two *ths*,' '*Swáhá*,' *analapriya*,—because the visarga has the form of the letter *ṭh* (o).

This merely alludes to the modern form of the 4, which exactly resembles the Bengálí visarga.

The oldest allusion he could furnish, was the following on the form of the 6, from Pingala's 'Prákrit Grammar.'

क्कगुरुवङ्कदुमत्तो अणोलङ्कहोइ सुद्धएक्क अलो

"The *guru* mark[1] is like the figure 6, crooked, and of two strokes; it is called also *lahu* (*laghu*), it is also denoted by one stroke or one minute."

This passage evidently alludes to a form of 6 more resembling the Bengálí than the present Nágarí type.

Another channel through which I was in hopes of tracing the ancient cyphers, was the numerical system of those Indian alphabets which bear most resemblance to the forms of the earlier centuries, such as those of Kashmír, etc. In the specimens of these, which I have introduced into the plate for the purpose of comparison, it will be seen that the three has certainly considerable affinity to our *d*; while the one and five approach nearly to our *a* and *h*. There is a faint resemblance in others of the group; but some again are totally changed.

The Tibetan numerals (of the seventh century) do not yield much more insight into the matter. They are, we may say, one remove backwards from the Bengálí numbers—the 1, 2, 3, and 5, only agreeing better with the Nágarí forms. The 1, however, agrees exactly with one of the ancient figures on the coins, and this has been my inducement to consider the latter as 1.

[1] *i. e.* The mark used to denote a short quantity in prosody and in music, which is formed ৬.

Upon regarding attentively the forms of many of the numerals, one cannot but be led to suppose that the initial letters of the written names were, many of them, adopted as their numerical symbols. Thus, in the Tibetan, 5 ྔ, we see the པ or *p* of the same alphabet, the initial of *pancha*. The same may be said of the Kashmírian, and the modern Hindí form ५, and indeed in some measure of the ancient forms *h* and *i*.

Again, the Tibetan 6 ྩ, resembles the *ch* ཅ of that alphabet: the Ceylonese form is exactly the *ch* of its alphabet, and there is an equally marked connection between the Nágarí ६ and the छ *chha*, which is the common name of this numeral.

On the same principle, in the absence of other argument, we may set down the *k* of our new series as 7, being identical with ཀ, the initial of *sapta*.

The modern 3 ३, has no small likeness to the *tr* of the older Nágari alphabets; nor does the 2 differ much from *d*; but these resemblances may be more ideal than real; for, by an equally facile process of comparison, they might be both derived from the Arabic figures, as might other members of the series, as 7 and 8, in the Nágari of the Nepalese coins particularly.

The 9 of the Tibetan, Bengálí, Nepalese, and Burmese numerals is precisely the *l* of the ancient alphabets. Now, in the allotment of the vowels numerically, the *lí* represents 9; but it would appear far-fetched to adopt one insulated example of derivation from such a source.

The 9, however, of the Suráshtra grants and coins is of a totally different order. It resembles the four-petalled flower of the *bél*, or Indian jasmine; and in the copper

plates we find it absolutely represented with a stalk (see No. 1, of pl. xl). Seeking the name of this flower in Sanskrit, *mallika*, the pandit reminded me that one of its synonymes was *nava mallika*, which the dictionaries derive from *nava*, 'praised, excellent,' but which may now receive a much more natural definition as the 'jasmine flower resembling the figure 9.'[1]

It is further to be remarked that, in many of the ancient systems, separate symbols were used to denote ten, twenty, etc. in combination with the nine units severally. The curious compound figure seemingly used for the 1 of 15 in the two cases quoted above *o* may be of this sort: indeed it somewhat resembles the Ceylonese ten (see plate). On this point, however, I can offer no demonstration, nor any other argument, save that we have already more than nine symbols to find accommodation for as numerals.

With all these helps, and analogies, I have endeavoured to arrange the nine old numerical symbols in their proper order in the accompanying plate, so as also to meet the conditions of the succession of dates on the coins of the satraps of Suráshtra. In this I am far from being confident of having succeeded; but having once, as it were, broken the ice, we may soon hope for a more perfect solution of the curious problem, through the multitude of new, or rather old, monuments which seem to emerge from oblivion just at the time they are wanted, under the united efforts of the Society's associates in central India. Once having proved that it was customary to date the

[1] [Prinsep's usually quick perception seems to have failed him here, as the Lantsa Numerals, in vol. xvi., 'Asiatic Researches,' p. 420, give almost the exact normal forms of 80 and 90, as found in the inscriptions and coin legends.]

coin of that early period, we must direct attention again to the monograms on the Bactrian, Indo-Scythic, and Kanauj coins, which may turn out to be also used numerically.

The numbers, then, which, from comparison with foreign and modern native series, as well as the other considerations above given, I have finally adopted, are as follows :—

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *a* | *b* | *d* | *f* | *h* | *j* | *k* | *l* | *m* | *o* | : |
| Varieties ? | *c* | *e* | *g* | *i* | | | | | *n* | *p* | |

Before concluding this division of my theme, I may be expected to explain in what era the dates of the Suráshtra coins can be expressed, so as to place Swámi Rudra Dámá, whom we perceive in the inscription to have followed at some reasonable distance Asoka himself, at the end of the fourth century, or about the year 390. If the Vikramáditya or Samvat be here intended, he will fall after the close even of the Arsakian dynasty of Persia, when the Greek was disused, and the arts had greatly deteriorated; when, moreover, the form of the Sanskrit character had undergone considerable change. If we take the Seleucidan epoch, which might have been introduced in the provinces tributary to Syria, Rudra will have reigned in A.D. 89. If, lastly, out of deference to Asoka's temporary supremacy in the Gujarát peninsula, we take the Buddhist era, then 543—390 will leave 153 B.C. about a century after Asoka, and in every respect the period I should like to adopt, were it possible to establish any more certain grounds for its preference. The most perplexing circumstance is that the grants of the

Balabhî dynasty are also dated in the third (or fourth) century, and that it is hardly possible to consider their dominion as contemporary with those of the satraps. For them, indeed, we must adopt the Vikramáditya era, whatever may be determined in regard to the one before us.

[Following out the view of the question suggested by Prinsep's remarks at p. 77, in 1848 I succeeded in demonstrating that these signs were uniformly independent symbolical numerals, each denoting in itself a given number, irrespective of any relative collocation;[1] and, therefore, that the *d* was equivalent to 300, wherever it might be found; and likewise, that the *l* and *m* stood for 80 and 90 respectively, whatever position they might chance to occupy. I then proceeded to distinguish those symbols of the Sáh coin dates that declared themselves severally units, tens, or hundreds, by their fixed place, in the order of value, which was always fitly maintained, notwithstanding that the figures themselves clearly could not change their signification by any relative re-arrangement. Beyond this, I cannot claim to have advanced the enquiry in any essential degree. The important aid that otherwise might have served me in the sequent classification of the numbers—the test of their recurrence on the coins of the Sáh kings—was altogether wanting, from the fact that the order of succession of those princes was in itself undetermined.

A re-examination of the entire subject was therefore sufficiently called for; and it is possible that the new data, which have lately become available, may contribute materially to solve the general problem of the system under which the ancient Indian scheme of notation was primarily conceived.[2]

[1] ['Jour. Roy. As. Soc.', vol. xii., p. 33.]

[2] [M. Reinaud's 'Mémoire sur l'Inde' was published after the appearance of my Essay in 1838. I therefore transcribe the information contributed by that work towards the general subject. 'Albyrouny a consacré un passage de son Traité sur l'Inde aux chiffres employés de son temps, chez les Indiens, avec une valeur de posi-

The most important elucidation that this subject has received since Jas. Prinsep's original discovery, consists in the 'Observations on the dates found in the cave inscriptions at Nasik,' by the Rev. J. Stevenson.[1] Among these records are to be found no less than twenty-eight figures, or combinations of figures, usually appended to the written exposition of the given value defined at length in the body of the text;[2] the lower numbers are suffi-

tion. Ces chiffres sont appelés par nous *chiffres Arabes*, et les Arabes les nomment *chiffres indiens*. Albyrouny s'exprime ainsi: Les Indiens, à la différence de nous, ne se servent pas des lettres de leur alphabet pour indiquer des nombres. Mais, de même que l'alphabet varie suivant les provinces, les chiffres changent aussi; les indigènes les nomment *anka* انک. Les chiffres dont nous faisons usage sont empruntés à ce que l'on a trouvé de plus convenable chez eux. Du reste, les formes sont indifférentes, pourvu qu'on s'entende de part et d'autre. Dans le Cachemire, on ne se sert pas de traits particuliers pour exprimer les nombres; on a adopté les signes employés par les Chinois. Mais un point sur lequel tous les Indiens sont d'accord, c'est de procéder d'après le système décimal.' . . . . . .
M. Reinaud continues: 'Arrêtons nous un moment sur les paroles d'Albyrouny: Les Indiens, a-t-il dit, ne se servent pas des lettres de leur alphabet pour exprimer des nombres. Il existe un traité sanscrit, composé par Aryabhatta, dans les premiers siècles de notre ère; et dans ce traité, comme cela se pratiquait chez les Grecs, les Juifs, et plus tard chez les Arabes, les nombres sont exprimés par les lettres de l'alphabet ayant une valeur numérale.* Apparemment, le procédé employé par Aryabhatta était tombé en désuétude au temps d'Albyrouny. Néanmoins, les traités scientifiques composés par Brahma-Gupta, au vii. siècle de notre ère, et par les écrivains postérieurs, ne supposent pas, en général, l'usage des chiffres; les nombres sont exprimés par des mots susceptibles d'être rattachés à une quantité quelconque. Albyrouny ajoute qu'on ne pouvait se livrer à la lecture des traités consacrés à l'astronomie, si l'on ne s'était d'abord rendu un compte exacte de cette manière de compter.' . . . M. Reinaud sums up his inferences to the following effect, 'Il semblerait résulter de l'emploi des lettres, de l'alphabet par Aryabhatta, pour exprimer les nombres, que dans les premiers siècles de notre ère, les Indiens mêmes, en employant ces lettres avec une valeur de position, n'avaient pas encore eu l'idée de recourir à des signes particuliers. A l'égard de la méthode mise en usage par Brahma-Gupta, elle s'explique suffisamment, d'un côté par l'habitude ou les indigènes ont été de tout temps de faire mystère de leur savoir; de l'autre, parce que des mots significatifs s'incorporent mieux dans un vers que des chiffres.'

[1] 'Jour. Bombay branch, Roy. As. Soc.', July, 1853, p. 35. 'Jour. As. Soc. Beng.' 1854, Note, p. 407.

[2] I could have desired that the facsimiles of these inscriptions should have been more calculated to command our faith in their exact rendering of the originals, but I observe that Dr. Stevenson himself does not place any great reliance upon the transcripts, as he remarks, 'I trust also to be able to compare all the published copies of the facsimiles with the inscriptions themselves, which, in respect to those at Nasik, I have been unable as yet to do, so as at least to get as perfect a copy of them as can be obtained in the present state of the rocks. As the facsimiles are the property of Government, and executed by another gentleman (Lieut. P. F. Brett), I have done nothing more than, to the best of my ability, see that the lithographer executed his task faithfully.'—Bombay Journal, 1853, p. 57. And again, p. 50, Dr. S. observes,

* Voy. un mémoire de feu M. Whish, intitulé, On the alphabetical notation of the Hindus ('Transactions of the Literary Society of Madras,' London, 1827).

ciently simple and obvious, and are only perplexing in the multiplicity of forms some of their exponents are seen to take; the larger sums on the other hand, are expressed by a crude and uncertain method, under which the amount has often to be read backwards in the current line of writing; thus, the generic symbol for *thousands* is ordinarily entered first, that for *hundreds* second, while the specific decimal, or unit cipher, which has to determine the value of the whole, is placed last in the order of alignment, followed by the rest of the inscription. At times again, the mark for *hundreds* is indifferently inserted before or after the figure which indicates the total.[1] If, by any possibility, further argument were required to that end—this double system of arranging the ciphers would alone establish that they were incapable of having their value enhanced or diminished by change of place.

Dr. Stevenson's point of departure, like my own on a previous occasion, was from Jas. Prinsep's investigations of April, 1838 (here reprinted); he does not seem to have seen my paper of 1848, and therefore expresses no opinion either for or against my position, but continues to follow Prinsep in reading ᒣ as *three*, in preference to *three hundred*; at the same time that he admits that the triple horizontal lines of the normal 3 fully suffice to express the lower number—for which indeed he has a second variant—and notwithstanding that his own materials contribute separate and independent signs for *ten, twenty, thirty,* and *one hundred*: the latter being specifically distinguished from the various generic signs for *hundreds*.

The next item I have to advert to, is the idea advanced that the Satrap numerals owe their forms to the Bactrian alphabet.[2] This supposition I can scarcely bring myself to entertain.

'It is difficult for me at present to say whether the frequent omissions of the point for म् and other anomalies, belong to the original, or are the faults of the facsimile.'

[1] Nasik Inscription, No. 2, plate 7.

[2] Dr. Stevenson remarks, 'In the Satrap inscriptions, the numerals used to express the different sums of money there mentioned are peculiar. At first I could determine nothing about their origin, but on a careful examination I found a strik-

The assumption is chiefly based upon the similarity traced in certain forms of the figures to the original letters of the Arian writing; in order to carry out the comparison however, very great liberties have to be taken with the normal forms of the characters themselves—still very incompletely ascertained—and even these, rather forced identifications, are confined to a very limited proportion of the entire suite of the numbers; while on the other hand many of the figures are clearly and indubitably composed of letters of the identical alphabet in which the inscriptions at large are expressed. That these ciphers in their original constitution actually were indigenous letter symbols seems to be further established by other more recent inscriptions, where such forms are frequently seen to follow the progressive modification of the associate alphabet. I omit the dry details incident to the verification of each symbol, referring my readers to the 'Journal of the As. Soc. Beng.,' in which the original paper is to be found.[1]

ing resemblance between the character denoting a thousand *(Sahasra)* and the Bactrian S reversed. This induced me to examine the rest of them, and I think it exceedingly probable that they are all derived from that source. The Bactrian Tz, pronounced in Sanskrit J or *Dsch*, will represent well the figure, which is first in 5 or 10 *(Dasha)*. The sign for 5 *(Pancha)* is the P, or the old Indian प inverted. The Bactrian double T also approaches very nearly to the 8 of our inscriptions, as if to denote ञ्ठ. It would appear, then, that the Bactrian letters had been introduced into the Satrap Indian inscriptions as numerical ciphers. The system, also, is the ancient Roman and Greek one, that in which there are different signs for the 1 in tens, hundreds, and thousands; our present decimal notation being, as I have noticed elsewhere, a comparatively modern invention of the Scindian merchants of the middle ages ('Jour. Roy. As. Soc. Bombay,' vol. iv.) Further research will probably show, as Mr. Prinsep has done with a few of them already, that the old Indian numerals are also ancient letters.'—Jour. Roy. As. Soc. Bombay, vol. v., p. 39.

[1] The Gupta units vary somewhat from the Sáh exemplars, and hence demand a passing notice. As yet I have only been able to discover three definite and complete forms,—the *one*, which is shaped as an ordinary hyphen, the ५ = *four*, and the curious figure that occurs on coin No. 57, pl. ii., 'Jour. Roy. As. Soc.' vol. xii., which in its outline follows the design of an alphabetical न. But, in treating of Gupta numbers, I must fairly warn my readers of a preliminary difficulty that I have experienced in regard to the correct point from whence their exponents should be viewed. The Nasik inscriptions display the symbol for *one hundred* written perpendicularly; and if that be the correct direction of the cipher in the general alignment, the Gupta dates running in front of the profile of the King ought to be read Mongol fashion, like the parallel names of the monarchs of the Gupta race, as usually expressed on the field of their gold currency. On the silver pieces of the Kumára Gupta, however, whether the sign for 100 may be reversed or not, the arrangement of the tens and units clearly demonstrates that the whole must be read as consecutive rather than as superposed figures, while, strange to say, the dates on the Skanda Gupta

In conclusion, I sum up the results of the present state of the enquiry by the exhibition of the lithographed plate of figures [xl. *a*] regarding which I have merely to add, that the second compartment includes all such symbols, whether lapidary, numismatic or graven on metal, that I am generally prepared to recognise. The third column reproduces Prinsep's primary conjectural arrangement of the ciphers and their supposed variants. The remaining spaces are filled in with the products of Dr. Stevenson's investigations, but I must warn my readers, that I have taken a double liberty with that author's materials; on the one hand, I have copied my examples of each cipher from the transcripts of the original facsimiles of Lieut. Brett, which are lithographed at large in the Bombay Journal, in preference to following the outlines entered in the companion table of numbers given in that Journal, and supposed to be compiled from the same sources.

On the other hand I have ventured to insert, subject to correction, two signs for 2, which Dr. Stevenson does not definitively acknowledge in his list; but which I obtain from his rendering of inscription No. vi.[1] The third figure for *hundreds*, under the Satrap heading, is also of my introduction, under similar authority.—E.T.]

## EXPLANATION OF PLATE XII.

Fig. 1, (from Steuart's plates), a silver hemidrachma.

Fig. 11, a coin belonging to Mulla Feroz of Bombay.

Fig. 13, a coin found by Capt. Prescott at Palhanpur in Gujarát, presented to me by Mr. Wathen.

These three coins have all the same legend, but No. 11 exhibits the application of the vowel *i* in two places, which the others want: the legend thus completed is,

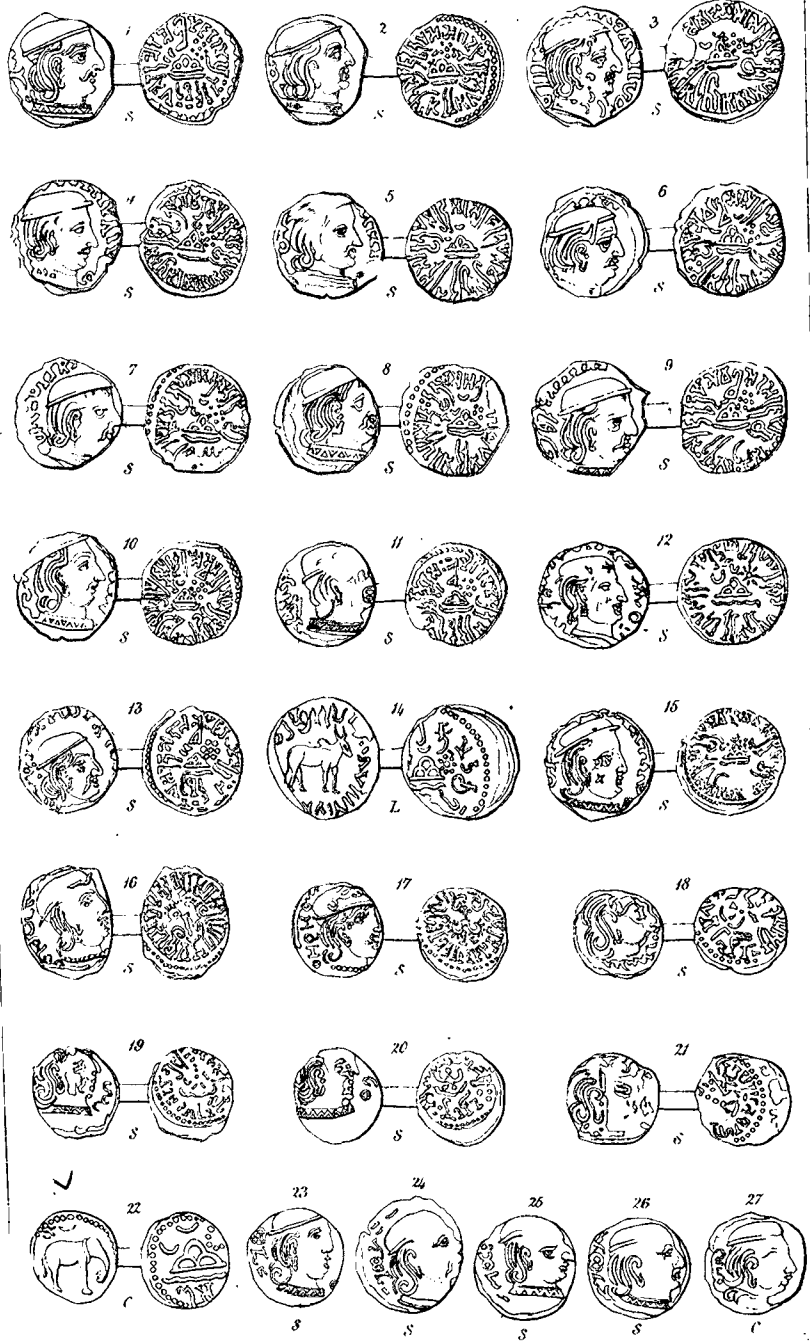
*Rájna Kshatrapasa Rudra Sáhasa, Swámí Jina Dámáputrasa,*

'Of the Royal Satrap, Rudra Sáh, the son of the lord Jina' Dámá.

and Buddha Gupta coins seem to necessitate a supposition of a contrary mode of distribution. I have entered the outlines of the Gupta numerals, both tens and units, in accordance with this somewhat arbitrary arrangement, leaving the point fairly open to correction, when more numerous and more perfect specimens of this coinage may decisively instruct us on the general question.

[1] 'Jour. Roy. As. Soc. of Bombay,' vol. v. p. 53.

# Saurashtra Coins.




W. W. & Co. lith. after J. Prinsep

Published by Stephen Austin, Hertford.

# Ancient Indian Numerals.

Pl. XL a

| No's | Numerals | Prinsep. | Stevenson. Fractions | Stevenson. Old Indian | Stevenson. Satrap | |
|---|---|---|---|---|---|---|
| 1 | – | a | – | | | 1 |
| 2 | = | b c | = | | ? ? | 2 |
| 3 | ≡ =– | d e | ≡ | | | 3 |
| 4 | | f g | | | | 4 |
| 5 | | h i | | | | 5 |
| 6 | | ? j | | ? | | 6 |
| 7 | | k | | | – | 7 |
| 8 | | l | | – | | 8 |
| 9 | | m n | | | – | 9 |
| 10 | | o p | | | | 10 |
| 20 | | | | | | 20 |
| 30 | | | | | | 30 |
| 40 | | | | | | 40 |
| 50 | | | | | | 50 |
| 60 | | | | | | 60 |
| 70 | | | | | | 70 |
| 80 | | | | | | 80 |
| 90 | | | | | | 90 |
| 100 | Gupta | Nasik | | | | 100 |
| 300 | | | | | | 300 |
| 1000 | | | | | | 1000 |

Gupta Numerals

Units – . . . ? ?

Tens

Hundreds

W West

Published by Stephen Austin Hertford.

The title of Jina Dámá, 'votary of Buddha,' is a better reading than Jina Dámá, 'subduer of that sect, formerly adopted. [My No. 11].

Fig. 2, (from Steuart's plates), a coin of Aga Dámá, son of Rudra Sáh. [No. 10].

*Rájna Kshatrapasa Aga Dámna, rájna Kshatrapasa Rudra Sáha putrasa.*

Fig 3, (ditto), a coin of Vijaya Sáh, son of Dámá Sáh. [No. 9].

*Rájna Kshatrapasa Vijaya Sáhasa, rájno mahá Kshatrapasa Dámá Sáha putrasa.*

Fig. 4, (ditto), a coin of Vira Dámá, son of Dámá Sáh. [No. 7].

*Rájna Kshatrapasa Viradáma, rájno mahá Kshatrapasa Dámá Sáhas putrasa.*

Fig. 5, (ditto), a coin of Rudra Sáh, son of Vira Dámá. [No. 13].

*Rájno mahá Kshatrapasa Rudra Sáhasa, rájno Kshatrapasa Virádámá putrasa.*

Another coin, apparently of this Rudra, in my possession, fig. 26, has a date which may be read 283; I find I have two coins of this prince (one given me by Mr. F. Stainforth). Colonel Stacy has also two of the same; they may be known by the epithet *mahá*.

Fig. 6, (ditto), a coin of Viswa Sáh, son of Rudra Sáh. [No. 4].

*Rájna Kshatrapasa Viswa Sáhasa, rájno mahá Kshatrapasa Rudra Sáha putrasa.*

Fig. 7, (ditto), a coin of Atri Dámá, another son of Rudra Sáh; behind the head, but more distinctly in my own coin (fig. 25), is the date 360? [No. 2].

*Rájno mahá Kshatrapasa Atri dámna, rájno mahá Kshatrapasa Rudra Sáha putrasa.*

This name is the nearest approach to the Ari Dámá of the inscription, who, however, was the son of Swámí Chastána. Colonel Stacy has also a coin of Atri Dámá.

Fig. 8, (ditto), of the same prince, introduced as shewing more clearly the name of his father.

*Rájna Kshatrapasa Atri . . . . . trapasa Rudra Sáha putrasa.*

Fig. 9, a coin of Visva Sáh, son of Bhatri Dámá. [No. 3].

*Rájno Kshatrapasa Visva Sáhasa, rájno mahá Kshatrapasa Atri Dámá putrasa.*

This coin has a date, which may be read 323, in which case it must precede the last two: the father's name was before read as Atri Dámá, whence the misplacement.

Fig. 10, a coin of Swámí Rudra, son of Swámí Rudra Dámá, in the obverse, the figures 39 (perhaps 390). Another has 385. [No. 12].

*Rájna mahá Kshatrapasa Swámí Rudra Sáhas, rájno mahá Kshatrapasa Swámí Rudra Dámá putrasa.*

Fig. 12, a new name, or new as to the second title; Rudra Sáh, son of the *great* Satrap Rudra Dámá, was presented to me by Lieut. E. Conolly, from Ujein.

*Rájna Kshatrapasa Rudra Sáhasa rájna mahá Kshatrapasa Rudra Dámá (?) Sáha putrasa.*

This is the only coin which bears the name of the repairer of the bridge, and that rather dubiously, as the father of the prince who

coined the piece. It has a date on the obverse, which I have interpreted 390, like the preceding.

Fig. 15, a silver coin belonging to Mulla Feroz of Bombay, similar to Mr. Steuart's coin, fig. 3. [No. 9].

*Rájna mahá Kshatrapasa Vijaya Sáhasa, rájna mahá Kshatrapasa Dámá Sáha putrasa.*

ig. 14, a copper coin, unique, discovered by Lieut. Conolly at Ujein, and placed in my cabinet through his kindness. Obverse, a bull, with a marginal legend, apparently Greek, some of the letters seeming to form the word *Basileus*, etc.

*Rajno mahá Kshatra(pa)* . . . . the remainder of the legend lost.

The letters are larger and better formed on this than on the silver coins. Most copper coins of the series exactly resemble the silver ones with a head on the obverse. Col. Stacy has a good specimen, of which the obverse (fig. 27) has apparently a date.

[It is now time that I should advert to the epoch of the Sáh kings and the position in which the somewhat difficult question involved at present stands. Prinsep's opinions are reproduced above in their entirety. In continuation of these researches, I myself attempted, some years ago,[1] to determine more precisely the period to which the rule of this dynasty should properly be ascribed; and I selected on that occasion, as the era best calculated, in general coincidences, for the due explanation of the figured dates extant on the coins, the cycle of Srí Harsha; a system of computation at that time only recently made known to us under the authority of Albirúní, whose work has already been largely referred to in these pages. In arriving at this determination, I did not neglect to consider the claims of other eras whose initial dates promised in any way to accord with the requisitions of the various historical and numismatic evidences derivable from independent sources. Notwithstanding certain leading recommendations that offered themselves in favor of the Buddhist era, I saw cause to reject unconditionally all idea of its title to rule the recorded registers.[2] The Seleucidan era was also tested

[1] ['Jour. Roy. As. Soc.,' vol. xii., p. 1 (1848).]

[2] [My present conclusion is that the date of the death of Sákya was never generally used in ancient times either for civil or religious computations, otherwise it would be hard to account for the impossibility of fixing its correct epoch, even in the

in its more obvious applicability to the local or epochal demands; and though many arguments were seen to be suggested in support of its selection, which have since been even strengthened by fresh combinations,[1] I am constrained to declare—apart from the slightest desire to adhere to first impressions—that I still give the preference to the *Srí Harsha* era!

Albirúní's account of this cycle will be found quoted at large, p. 166, 'Useful Tables'; and though it will be seen that he himself confesses to doubts and difficulties in regard to its origin and true initial date, I am, for the moment, content to take the fact that some such scheme of chronological admeasurement, reckoning from an event proximate to 457 B.C. or 400 before Vikramaditya,[2] was actually once in use in India, and that the memory thereof, whether distinct and definite, or jumbled and perverted, remained current in the land till the 11th century A.D.

We are not yet in a condition to discuss exact annual or

days of Huen Thsang, who, in his own words, shows how important, and yet how difficult of determination, this point was held to be among the Buddhist communities of India when he sojourned amongst them.]

[1] [I allude prominently to the concession of Greek supremacy, which, it will be seen, I have admitted more definitely since I last wrote on the subject,—though the abnegation of the employment of dates on the Bactrian coins, from whose types the Sáh money was copied, detracts somewhat from the value of the inference. One of the previous obstacles to the admission of the dependence of the Sáh kings, was the doubt respecting the absolute import of the term क्षत्रप, suggested by Prof. Wilson, who remarked, 'Ariana Antiqua,' p. 205, 'Kshatrapa admits etymologically of its being explained chief or protector of the Kshatriya, or martial race, and may possibly be the origin of the Persian title Satrap, as Prinsep supposes, although there is some incompatibility in the assignment of the titles of Rája and Satrap to the same individual.' On reconsideration, I do not quite admit the force of the latter reason, and the identification of the क्षत्रप, as the titular equivalent of the Greek ΣΑΤΡΑΠΗΣ, seems now to be set at rest by the recurrence of the term in the Bactrian Páli as (Inscriptions, vol. i., pp. 99–146, Bactrian coins *infrâ*); and in Indian Páli as , pl. xliv., fig. 14.

[2] [Major Cunningham has originated a speculative date of 477 B.C. as 'the era of the Nirvána of Sakya Sinha, not as established in 543 B.C., but as generally believed in by the early Buddhists for a period of several centuries.' This scheme is based on the fact of Asoka's conversion to Buddhism falling 218 years after the *Nirvána*, the former being fixed from other sources at 259 B.C.; hence the Nirvána itself is assigned to B.C. 477 (259 + 218). A subordinate section of the argument is grounded upon Kanishkas having 'flourished' an even 400 years after the Nirvána, and yet Major Cunningham, in the same page, while objecting to my inferences, naively remarks—'The difference of exactly 400 years between the dates of Srí Harsha and of Vikramaditya is, to say the least, very suspicious.'—'Jour. As. Soc. Beng.', vol. vii. of 1854, p. 704.]

monthly dates; an approach to the truth is all we need be concerned with for the time being; for, while the arguments *pro* and *con* extend to questions of centuries, we can afford to leave a very open margin for discretional modifications among the units and tens. I do not propose to recapitulate at any length my original speculations in regard to the correct epochal position of the Sáh kings, but it is needful that I should notice any confirmation my opinions may since have received, as well as any flaws, real or imaginary, that may have been detected by others in my reasoning or inferences.

Amongst other questions that arose during the course of my examination of the materials then available for the illustration of the history of these administrators, was that of their partial or complete independence; and it will be seen that though the balance of evidence appeared to favor the latter supposition as regarded the later members of the dynasty, yet that I reserved a full option for the recognition of the subjection of the earlier rulers of the line to Greek supremacy.[1]

In addition to this, in the detail of the coins themselves, while speaking of the obverse legend on a coin of Rudra Sáh, son of Jiwa Dámá, as 'a possible corruption of ΔΙΟΝΥΣΙΟΥ,' I added, 'there is a king of this name among the Bactrian Greeks, made known to us by his coins, which, in their types, seem to connect him with Apollodotus.'[2] This notion has been improved upon by Prof. Lassen to an extent that I am scarcely prepared to follow him in. His theory seems to be, that Íswara Datta was invested with the office of Satrap about the commencement of the 4th century of the era made use of on the coins (*i.e. circâ* 157 B.C.), and that, about this time, Apollodotus must have been king; hence it is inferred that he was the Suzerain who raised Íswara to his local honours. It is further added, 'Dionysios, whose name appears sufficiently clear on

[1] ['Jour. Roy. As. Soc.,' vol. xii., pp. 29, 32, 45, 46.]
[2] ['Jour. Roy. As. Soc.,' vol. xii., p. 52. See also Catalogue *infrâ*; Dionysius Hemidrachma. No. 1.]

Rudra Sinha's money, reigned *circâ* 113 B.C.'[1] And, finally, the Professor imagines he detects the imperfect orthography of the name of Hippostratus on the obverse of the coins of Rudra Sinha III.[2] Suffice it to say, that the author, so far from contesting my dates or their attribution, introduces us unintentionally to a new feature regarding them, in a purpose their originators could but little have contemplated—a rectification, by their means, of the epoch of the Greek Suzerains, under whose auspices the coins are supposed to have been issued.

I next pass to Major Cunningham's review of the Sáh period; and, as he contests my inferences, I permit him to state his case, in some detail, in his own way:—

'3rd. The independence of the native princes of Gujrat between 157 and 57 B.C. is completely at variance with the Greek accounts of Menander's conquest of Sarioustos or Suráshtra, between 160 and 130 B.C., which is further authenticated by the long protracted currency of his coins at Barygáza or Baroch.

'4th. The alphabetical characters of the Suráshtran coins are so widely different from those of the Pillar and Rock Inscriptions, and, at the same time, are so much similar to those of the Guptas, that it is impossible not to conclude that there must have been a long interval between Asoka and the independent Sáh kings, and an almost immediate succession of the Sáh kings by the Guptas. . . . .

'5th. The author of the Periplus of the Erythrœan sea, who lived between 117 and 180 A.D., states that *ancient* drachmas of Apollodotus and of Menander were then current at Barygáza (Hudson, 'Geog. Min.', i. 87); this prolonged currency of the Greek drachmas points directly to the period of the Indo-Scythian rule; for though we have some hundreds of their gold coins, and many thousands of their copper coins, yet only one solitary specimen of their silver coinage has yet been discovered. [A mistake: the coin is copperplated over; see *infrâ*, Catalogue, under Kadphises]. The Indo-Grecian silver probably continued current until after 222 A.D. when the Indo-Scythian power began to decline. From this period, about 250 A.D., I would date the independence of the Sáh kings, and the issue of their silver coinage, which was a direct copy in weight, and partly in type, from the Philopater drachmas of Apollodotus.'—'Bhilsa Topes,' p. 149.

In regard to the criticism in paragraph 3, I have only to observe that, had I exclusively argued for the absolute and continuous independence of the Sáh kings of Gujarát, the objections therein advanced might be held to be fairly stated. But even Major Cunningham's own date of 160-130 B.C., if admitted, need not interfere with the concession of a subsequent assertion

[1] ['Indische Alterthumskunde,' vol. ii., p. 794.]

[2] [Rudra Sáh, son of Rudra Sáh. (My No. 5, p. 91, *infrâ*.)]

of independence on the part of the local governors; and the concluding argument, though the author seems indisposed to allow it, has been refuted in anticipation by Vincent's observations,[1] to which I had given every prominence in my paper which formed the subject of Major Cunningham's comment: had the author printed or even noticed the gist of my argument on the opposite side, and then replied to it, I should have been anxious to have treated his reasoning with more respect than I am able to accord to a mere reiteration of a fact which bears, at the best, an alternative interpretation.

With reference to the ratiocination embodied in the fourth paragraph, I may remark that I have already replied to the chief points involved;[2] but as Major Cunningham and myself differ so completely in our fundamental tests of the progress of writing, and as I am therefore equally unprepared to accept his estimates of similitudes, it would be a sheer waste of time my arguing up from minor details, or attempting to reconcile them, when I have other and less fallacious means of arriving at a judgment.

In respect to the data and inferences embodied in the fifth paragraph, I would simply quote Major Cunningham's own words in regard to the general question between us—'We agree as to the facts, but differ in our deductions.'[3]

My original proposition for the emplacement of the Sáhs contemplated the inclusion of all their dated coins within the fourth century of the Srí Harsha era, and inferentially confined the thirteen kings, whose numismatic testimonies had thus supplied us with epochal records, between B.C. 157 and 57. Among other pure and avowed speculations, which the open nature of

[1] ['That the coins of these princes should pass current at Barugáza is no more uncommon than that the Venetian sequin and the imperial dollar should be at this day current in Arabia, or that the Spanish piastre should pass in every part of India and the East; that is, round the world, from Mexico to Manilla, and in some instances, perhaps, from Manilla to Mexico again.'—Vincent, 'Commerce, etc.' ii. 204.]

[2] ['Jour. As. Soc. Beng.,' vol. xxiv. (1855), p. 90; also 'Jour. Roy. As. Soc.,' vol. xii., p. 25.]

[3] ['Bhilsa Topes,' p. 145.]

the question and the absence of positive information to a certain extent invited, I was led to remark, in referring to the well-ascertained average of the length of Indian reigns, that the thirteen accessions in question 'should, under ordinary circumstances, be represented by a sum of more than two centuries instead of being compressed into less than one;'[1] and I further added, 'the almost unvarying similitude that pervades the entire suite of the Sáh coins, in its simple mechanical indication, implies a comparatively speedy sequence of fabrication.' In endeavouring to account for the brief duration of the sway of these potentates, I conjectured a possible republican form of government under which 'two or more rájas were simultaneously invested with a share in the conduct of the state, or, if elected as sole rulers for the time being, the periods of retention of authority were limited directly and definitively by law, or terminable at the will of the majority.'[2] However, these difficulties are certainly more simply and satisfactorily explained by the supposition of a nomination of another description originally emanating from some Suzerain authority to delegated Satraps or governors of provinces.

As regards the consecutive succession of these princes, we have hitherto been compelled to rely upon patronymics and other indeterminate vouchers; and, though it is a question whether our power of defining the values of the date ciphers is sufficiently advanced to authorise our following a serial arrangement based upon their interpretation, we may still profitably test the process with this reservation. The fairly deciphered and reasonably congruous dates determine the order of succession as follows:—

| | LIST OF SAH KINGS. | DATES. |
|---|---|---|
| 1. | Íswara Datta, son of Varsha[3] | None. |
| 2. | Atri Dámá, son of Rudra Sáh | 311, 312. |
| 3. | Viswa Sáh, son of Atri Dámá | 320, 335. |
| 4. | Viswá Sinha, son of Rudra Sáh | 323, 328, 335. |
| 5. | Rudra Sáh, son of Rudra Sáh | 330. |

[1] ['Jour. Roy. As. Soc.,' vol. xii., p. 37.]
[2] ['Jour. Roy. As. Soc.,' vol. xii., p. 40.]
[3] [A private individual.]

| LIST OF SAH KINGS. | DATES. |
|---|---|
| 6. Dámá Jata Sriyah, son of Dámá Sáh..... | 344. |
| 7. Vira Dámá, son of Dámá Sáh..... | (no date deciphered). |
| 8. Dámá Sáh, son of Rudra Sáh..... | 345. |
| 9. Vijaya Sáh, son of Dámá Sáh..... | 353, 354, 355. |
| 10. Aṣa Dámá, son of Rudra Sáh ..... | 370. |
| 11. Rudra Sinha, son of Swámí Jíwa Dámá[1] | 374, 375. |
| 12. Swámí Rudra Sáh, son of Swámí Rudra Dámá ..... | 384, 390. |
| 13. Rudra Sáh, son of Vira Dámá ..... | 387. |

It results from these dates, however imperfect in their comprehensive series, that either there was a double appointment of simultaneous effect, or an indeterminate periodical supersession and interchange of office-bearers, obeying the fiat of the feodal lord, in the one case; or, following the constitutional order occasionally interrupted by the revolutionary convulsions of independent government, in the other. We are still unable to identify the Swámí Rudra Dámá, son of Swámí Chandana, of the Girnár inscription, with any of those monarchs whose mints have supplied us with records of their rule; but looking to the delayed introduction of the extra title of Swámí—as now defined by the list adapted to the dates—we may, for the present, conjecture the individual to have been the father of Swámí Rudra Sáh; and may even, with but slight stretch of imagination, shadow forth an association of the dubious inscription date of *72, with his fitting place in the order of succession and the independence then achieved, to which he lays claim in his monumental writing.

I next proceed to notice such numismatic novelties of this series as have come to light since Prinsep wrote.

Foremost and most important among these are the coins of Íswara Datta, the son of Varsha, the first Rája of my list.

The obverse legends of the three specimens I have had an opportunity of inspecting are, like the rest, couched in imper-

[1] [ A private individual.]

fect Greek letters, the best representation of which is as follows: [illegible] The exergue is, however, remarkable in its contrast with the subsequent series, in having no cipher date, which would seem to indicate that the system of marking the year of issue was not as yet introduced.

The reverse bears the subjoined legend:

रज्ञो मह क्षत्रपस ईश्वर दत्तस वर्ष पुथ—[1]

*Rájno mahá Kshatrapasa Íswara Dattasa Varsha putha—*

The coins of Dámá Jata Sriyah are also among our later discoveries. Dr. Stevenson first published a notice of a coin of this prince from the Junir hoard (August, 1846). I have since met with two or three further specimens of these rare coins.

The reverse legend runs—

रज्ञो मह क्षत्रपस दमजट श्रीयः रज्ञो मह क्षत्रपस दम सह पुत्रस

*Rájno mahá Kshatrapasa Dámájata Sriyah Rájno mahá Kshatrapasa Dámá Sáha putrasa.*

The following readings of the coin legends of Dámá Sáh, the son of Rudra Sáh, are given on the authority of Dr. Bird, who transcribed them for me from the originals in his own possession in 1848.

रज्ञो मह क्षत्रपस दम सहस रज्ञो मह क्षत्रपस रुद्र सहस पुत्रस

*Rájno mahá Kshatrapasa Dámá Sáhasa Rájno mahá Kshatrapasa Rudra Sáhasa putrasa.*

Finally, I have to advert to the unpublished coins of another Swámí Rudra Sáh, whose patronymic is only imperfectly retained on the surfaces of the limited number of specimens that have come within my cognisance.[2]

रज्ञ मह क्षत्रपस श्वम रुद्र सहस रज्ञ मह क्षत्रपस श्वम सत्य सह पुत्रस

*Rájno mahá Kshatrapasa Swámí Rudra Sáhasa Rájno mahá Kshatrapasa Swámí Satya Sáha putrasa.*

These coins are chiefly remarkable in their accordance, in the style and fashion of their Sanskrit legends, with the approximate specimens from the mint of Swámí Rudra Sáh, No. 12; and the more extensive debasement of the Greek exergue on the obverse.—E.T.]

[1] [The concluding letter is defective in all the three specimens, the lower portion only being visible in each. What remains seems to form a portion of an ordinary स, with a second line below the ordinary subjunctive sign of that letter.]

[2] [Lieut.-Colonel Bush, Bengal Army—one silver piece. G. H. Freeling, Esq., Bengal Civil Service—one silver and one plated coin.]

Fig. 16. In this silver coin found in Katch in 1837, and presented to me by Mr. Wathen, the central emblem of the reverse is changed to a kind of trident; the legend is also altered from that of a Satrap to one of a paramount sovereign:

परम भानुवीर राजाधिराज श्री कुमारगुप्त महेन्द्रस्य

*Parama Bhánuvíra Rájádhirája Srí Kumara Gupta Mahendrasya.*

'Of the paramount sovereign the heroic king of kings Srí Kumara Gupta Mahendra.'

Fig. 17, another of the same kind, having the same Sanskrit legend, but, behind the head, the Greek letters may be read ONONOY, or RAO NANO? it was presented to me with the last by Mr. Wathen.

Figs. 18, 19, 20, and 21, have the same symbol, but the workmanship is very much deteriorated. The legend on them all has at length been deciphered by the collation of several specimens presented to me by Mr. Wathen, and found in various parts of Katch, Kattywár, and Gujarát, by Capt Prescott, Capt. Burnes, Dr. Burn; as well as the few inserted in the plates of Mr. Steuart's coins.[1]

परम भगदतम राजश्रीस्कन्दगुप्त क्रमादित्य

*Parama Bhagadata ma (ha) Rája Srí Skanda Gupta (vi) kramaditya.*

But as I have a larger assortment of the coins of the same king to introduce into a future plate, I will postpone further mention of this series for the present.

[I append to this essay my latest classification of such silver coins of the Guptas as are associated with the types last adverted to by Prinsep.

SRÍ GUPTA.

CLASS A: Silver, weight 31 grains. Mr. G. H. Freeling, Bengal Civil Service. Unique.

OBVERSE:—Device, the original type of the Sáh head, apparently unchanged in outline or details.

LEGEND, as usual, in imperfect Greek characters, the concluding six letters of which alone are visible, thus—ΛCΣOΣO

REVERSE:—Device, a singular figure that may possibly represent the early design of the Gupta peacock as rendered by the local artists, beneath which is a linear scroll of three semi-circles similar to that

[1] By a letter from Prof. Wilson I learn that Mr. Steuart's plate is to appear in the Royal Asiatic Society's Journal; but that it had time to journey to India and back before the outcoming number went to press! I regret I am thus deprived of the power of adding to this note the observations of the learned in England on the Surashtra coins.—J.P.

seen in continued use on certain silver coins of Skanda Gupta;[1] above the main device are retained the Sáh cluster of stars and a minute half-moon seemingly borrowed from the same source.

LEGEND—

श्री—न्द्गुप्तवक्रमद्रस्य श्रीगुप्तकललद्र — — —

Prof. Fitz Edward Hall proposes to amend my transcript, thus—

श्रीनन्द्गप्त विक्रमेन्द्रज श्रीगुप्त कीलालेन्द्र — — —

To this he assigns the following translation: "The auspicious, Kílálendra Srí Gupta, son of the auspicious Nanda Gupta, an Indra in prowess."

If this should eventually prove to be a piece of the Srí Gupta, the founder of the dynasty known by his name, it will establish a claim on our attention, altogether apart from its novelty as the unique representative of the money of that king —in the evidence of the close and direct imitation of the technic art of the Sáh coinages, which it develops in so much more distinct a degree than the local issues of the Gupta family of a later date. Indeed, this association is so striking that I was, at first sight, almost inclined to modify my original impression of a deferred revival of the Sáh coinage by the Guptas, on their possessing themselves of the province of Saurâhstra, and to doubt whether it would not be necessary to approximate the two races more closely in point of time, in order to explain with any plausibility the mechanical coincidences of the coinage; but, though these will be seen to be strongly marked in the case of the obverse, or conventional portion of the die, the reverse, or dynastic stamp, is materially changed, both in the leading device and, more important still, in the shape of the letters—so that, in this respect, all my early arguments still hold good;[2]

[1] ['Jour. As. Soc. Beng.,' vol. iv., pl. xlix., figs. 4, 5; vol. vii., pl. xii., fig. 19; 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., figs. 43, 44; 'Ariana Antiqua,' pl. xv., fig. 20. Prof. Wilson, in speaking of the reverse device of this particular coin, describes it as 'an ornament like a disintegrated Chaitya.'

[2] ['Jour. Roy. As. Soc.,' vol. xii., pp. 16, 17.]

and, in regard to the barbarized Greek, the inheritance of Sáh imperfections, there need be no difficulty in recognising thus much of the power of imitation of its letters, when we know that on other mintages the Gupta artists were able to achieve fully intelligible Greek adaptations of Eastern names.

### KUMÁRA GUPTA.

CLASS B: Pl. xxxvii., figs. 16, 17; 'Jour. Roy. As. Soc.,' vol. xii., pl. ii, figs. 39, 40, 41, 42; 'Ariana Antiqua,' pl. xv., figs. 17, 18.

OBVERSE:—Head of the king in profile: the outline and design are nearly identical with the Suráshtran prototype—the mintage of the Sáh kings—at the back of the head is ordinarily to be seen a mutilated portion of the Scythian title PAO NANO. This important legend affords another link in the direct association of the Guptas with the Indo-Scythians, which is here the more marked, in that, while the device itself is servilely copied from the Sáhs, their obverse Greek legends are superseded by this new title.

REVERSE:—It is difficult to determine satisfactorily what the emblem occupying the reverse field may be intended to typify, but the most plausible supposition seems to be that it displays an advance upon the conventional representation of the peacock under Western treatment, following out the artistic notion of that bird given in Srí Gupta's coin.

LEGEND:—

परम भगवत राजाधिराज श्रीकुमार गुप्त महेन्द्रस्य

*Parama Bhagavata Rájádhirája Srí Kumára Gupta Mahendrasya.*

The second word of this legend is the only portion of the whole that is at all open to question; it has been read *Bhánuvira* by Prinsep,[1] but this is not by any means a satisfactory interpretation. The first and third letters are fixed and constant in the various examples, and are properly rendered in each case as भ and व; the second and fourth letters vary considerably in outline on the different specimens; the second letter I have never yet met with in its perfect shape as ग when tried by the test of the ग in Gupta, indeed the majority of the coins display it more after the form of a न, as that consonant is found later in

[1] [Prof. Wilson ('Ariana Antiqua,') has suggested *Bhattaraka* (?) which the Udayagiri inscription ('Bhilsa Topes,' p. 151) rather recommends to our notice.]

the legend in Mahendrasya. The same remark also applies to the final त. I see that Prof. Mill has conjecturally supplied the word *Bhagavata* in the prefix to Kumára Gupta's titles on the Bhitárí Láṭ ('Jour. As. Soc. Beng.,' vol. vi., p. 4), but Prinsep's facsimile of the inscription, though it accords the needful space for the exact number of letters, gives the final as a manifest न; in saying this, however, I must remind my readers, that in the alphabet in question, the slightest possible inflection and continuation of a line constitutes the essential difference between the two letters न and त, and on the other hand the local copper plates of the Valabhis render the ग very much after the shape of the Eastern त, while the indigenous त is but little different from the न of the coins under reference. And finally as the words *Parama Bhagavata* appear in all their indubitable orthography on the succeeding coins of Skanda Gupta, we may fairly assume a mere imperfection in the expression of the individual letters and leave the word as it has been entered in the legend above.

The coins under notice are not always complete in the Sanskrit legends; for instance, an otherwise very perfect piece in the cabinet of the Royal Asiatic Society has the word राजाधिराज abbreviated into रजाध; and No. 39, pl. ii., 'Jour. Roy. As. Soc.,' vol. xii., has the same word contracted to राजाधिर.

### Skanda Gupta.

Class C: Pl. xxxvii., figs. 18, 19; 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., figs. 43, 44; 'Ariana Antiqua,' pl. xv., fig. 20.

Obverse, as in class B, Kumára Gupta, but the execution has greatly deteriorated; on some specimens traces of the word NANO are still to be seen.

Reverse:—The device in this class of money, appears to offer a more direct imitation of that of the Srí Gupta pieces, than did the intermediate Kumára reverse types, these latter are seen to reject the foot scrolls and to vary the details of the centre figure to a considerable extent.

Legend:—परम भगवत श्री स्कन्द गुप्त क्रमादित्य,

*Parama Bhagavata Srí Skanda Gupta Kramáditya.*

Prinsep, in his collated reading of the legends on these coins adopted the letter **म** (for **महा**) as occurring after the word **भगवत** [or **भगद्त** as he made it], which he found to be followed by the title of **राज**, which precedes the name of the monarch. This rendering, he would seem to have drawn from fig. 29, pl. ii., Steuart ('Jour. Roy. As. Soc.,' 1837); but as the like letters do not generally recur, I have marked this as the exception rather than the rule.

The weights of these coins vary from 23 to 29 grains.

CLASS D: 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., figs. 45, 46; 'Ariana Antiqua,' pl. xv., fig. 19.

OBVERSE:—Crudely outlined head, with traces of the title NANO in front of the profile.

REVERSE:—Figure of Nandí identical in form and position with the emblem on the *seal* of the Valabhi family as found attached to their copper-plate grants. ('Jour. As. Soc. Beng.,' vol. iv., pl. xl., and p. 487).

LEGEND:—[Restored.]

**परम भगवत श्री स्कन्द् गुप्त क्रमादित्य**

*Parama Bhagavata Srí Skanda Gupta Kramáditya.*

These legends are frequently very incomplete, varying in the number of letters in each.

The standard of these coins is very uncertain, rising from a weight of 21 to 30 grains.

CLASSES E, F, G. [The references are prefixed to each variety.]

OBVERSE:—The usual head, generally ill-defined, but still identical in many respects with the original device on the obverse of the Sáh medals; it is occasionally also accompanied by distinct traces of the word NANO.

REVERSE:—Central symbol in the form of an altar, which is supposed to represent the common altar-shaped receptacle of the sacred Túlsí tree of the Hindús. Legends restored.

CLASS E: 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., fig. 49.

**परम भगवत श्री स्कन्दगुप्त क्रमादित्य**

*Parama Bhagavata Srí Skanda Gupta Kramáditya.*

CLASS F: 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., fig. 50.

परम भगवत श्री स्कन्द गुप्त परमादित्य

*Parama Bhagavata Srí Skanda Gupta Paramáditya.*

CLASS G: 'Jour. Roy. As. Soc.,' vol. xii., pl. ii., fig. 51.

परम भगवत श्री विक्रमादित्य स्कन्द गुप्त

*Parama Bhagavata Srí Vikramáditya Skanda Gupta.*

The irregularity in the completion of the legend, noted as occurring on Skanda Gupta's coins with the bull reverse, appears in a still greater degree in those of the present class.

The weights of these coins is more than ordinarily unequal, rising from 22½ to 33 grains.

Though not properly susceptible of classification with any Gupta series of coins, it is as well to take this opportunity of noticing in connexion therewith a species of money which seems to constitute an independent derivative from the same Saurásh-tran type that served as a model for the local currency of the Guptas in certain western provinces of their empire.

I advert to the pieces figured as Nos. 6 to 8 and 9, pl. xxvii.[1] Prinsep, at the moment of their publication (December, 1835), scarcely attempted any decipherment of the certainly very unpromising legends, and was equally at fault in regard to the reverse device which he described as 'a symbol in the form of a trident;' when, subsequently, he came to take up the general subject of the Sáh and Gupta silver coinage in full detail, he still essayed no advance upon the attribution of this offshoot of their common prototype. In my paper on the Sáh kings,[2] I made some slight progress towards the determination of the purport of the legends; and, apart from the typical coincidences, I was able to demonstrate more precisely the Sáh association in the decipherment of the words राज्ञो महा क्षत्रपस on the margin of the best preserved specimen of the series.

[1] [Other examples of this currency will be found delineated in 'Jour. Roy. As. Soc.,' vol. iv., pl. ii., fig. 30; vol. xii., pl. ii., figs. 35 to 38.]

[2] ['Jour. Roy. As. Soc.,' vol. xii., p. 64, 15th April, 1848.]

A coin of Mr. Freeling's, of an early date in the serial issue, presenting a well defined and nearly complete legend, materially advances the inquiry, and furnishes a key to the strangely distorted letters stamped on the later emanations from the parent mint, though it leaves us still far from any conclusive assignment of the class of money to which it belongs. I proceed to describe the piece in the ordinary detail.

Silver, weight 27 grains.

OBVERSE:—The usual Sáh head, apparently but little modified. This surface of the coin is damaged, but fully one-half the marginal space, around the profile, remains uninjured, and in the total absence of any sign of a letter confirms my previous supposition,[1] that the use of the Greek legend was not extended to this class of coin.

REVERSE:—Device, a barbarized imitation of the Minerva Promachos of the Bactrian coinage.

I was once disposed to look upon the singular figure on the reverse of these coins as the Buddhist device of a man: I was led to this conclusion by the similarity of the form of the figure sketched by Jas. Prinsep, in fig. 21, pl. iv., to that occurring on the Behat type of coins;[2] but I now observe that Prinsep, in his second engraving of the same coin (fig. 9, pl. xxvii.), omits the left arm, in its downward position, which constituted the most essential point of Behat identity.

LEGEND:—ग्रह भुनद्दरकसरज्ञ महक्षत्रपरमदवककृभसदमन

OPTIONAL READINGS श्रीः म्न ट्ट ह कॄ

The configuration of certain letters in these legends demands a passing notice. The character which Prinsep took for *pr*, etc., is now satisfactorily proved to be an म: the form is peculiar, but still it bears sufficient affinity to the general idea of the Gupta म. In the later specimens of the coinage, its upper section is distinguished from the ordinary प by the rounding off of the lower portion of the first down-stroke, while the प itself is

[1] ['One item seems safely deducible from the unoccupied margin, to be found around the bust in the broader coins, viz., that the use of Greek or its attempted representation was here discontinued.'—'Jour. Roy. As. Soc.,' vol. xii., p. 63.]

[2] [Pl. xix., fig. 16; pl. xx., figs. 45, 47, etc.]

squared at the base. The nearest approach to identity with this numismatic म is to be found in the outline of that character as expressed on the Udayagiri Inscription; but it must be remarked that this similitude affords but little aid towards determining geographical limitation, as the majority of the letters of the inscription itself are exceptional, and do not accord with the characters of the other writings of the same locality. The न of these coins takes the same shape as those on Kumára's silver coins, Class B, above adverted to. The remaining letters, as far as they have been definitively identified, seem to follow the ordinary Sáh style.—E.T.]

45435

# XX.—ON THE APPLICATION OF A NEW METHOD OF BLOCK-PRINTING, WITH NOTICES OF UNEDITED COINS.

MAY, 1838.

In all Muhammadan countries it is the well-known custom of those who move in the rank of gentlemen to apply their seals in lieu of their written signatures to letters, bonds, and other written documents—not as we are accustomed to do it, by an impression on wax, but by smearing the flat surface of the seal with ink, and printing in the manner of type, so as to leave on the paper a white cipher upon a black field. It may be in consequence of this custom, as much as from religious prejudice, that Muhammadan seals are almost invariably confined to letter mottos; seldom ornamented, but, if so, merely with flowers, etc., done in outline; because such only can be faithfully pourtrayed in a type impression, which, of course, cannot at all represent a head or other relievo design.

The money of the Musalmáns was in the same manner generally impressed only with the signet or the titles of the sovereign, well adapted to a flat surface of thin metal.

Seeking an easy and expeditious mode of making public the collection of Muhammadan coins in my own and my friends' cabinets, it thus occurred to me that by forming from them in sealing-wax, or in type metal, an exact counterpart of the die which had been used in striking these pieces, I should be able to use it, in the native fashion, for producing ink impressions along with the ordinary letter type; while, as the coin itself would in every case furnish the mould, every chance of error in copying would be removed: and, though the elegance of a shaded engraving could not be attained, still this would be more than compensated by the scrupulous fidelity of the representation.

My first trial was so encouraging that I at once resolved on carrying

the plan into execution on an extensive scale, and I have now prepared for the press upwards of two hundred coins done in this novel and exceedingly simple manner.

As, however, it will be in every respect more convenient to present them in a continued series as an accompaniment to my tables of the value of Indian coins already published, I propose merely to introduce into the pages of the Journal a few examples of such coins as are new, rare, or, from other causes, worthy of particular description.

But first, in deference to the established custom in such cases, I must assign to this newly-invented art some Greek polysyllabic appellation; and (without intending the undignified lapsus of a pun) I cannot propose one more expressive of the process than *Rupography*—not from rupee, the common designation of our Indian money, nor yet from the Sanskrit word *rúpa*, 'form, likeness,' but in a genuine and orthodox manner from the Greek *ρύπος*, *sigilaris cera*, or sealing-wax, the substance upon which the impression of the coin is first received, and which will itself serve as the printing material, if it be not desired to preserve the block in the more durable material of type metal, by a second transfer from the sealing-wax to a clay or gypsum mould, into which the latter substance can be cast in the usual manner. Some sharpness of outline is lost by this triple operation; and where a great many copies are not required, the *rupographical* process may be safely confined to the first stage, or simple impression on sealing-wax.

As a first specimen,[1] then, of the capabilities of this art of *rupography*, I select a coin, or rather medal, purchased by myself some years ago at Benáres. It is of Husain Sháh, generally accounted the last Súfí monarch of Persia; for, after his abdication in A.H. 1135, his son Tamásp held but a nominal sovereignty, the real power being usurped by Mahmúd the Afghán.

Marsden would designate this as one of the medals of the Persian kings properly so called, intended to be hung and worn on the neck. It had, when I bought it, a hasp for suspension; but still I do not imagine it to have been struck for that express purpose, but rather as a crown piece for distribution to courtiers on a birth-day, as is still the custom at Dihlí, at Lucknow, and other native courts. It is of nearly pure silver, and weighs 844.3 grains, a little short of five rupees, and somewhat above as much in value.

Marsden gives the drawing of another medal of the same monarch, which has merely the usual coin inscription.

[1] [I have not thought it necessary to reproduce these facsimiles, in illustration of the mechanical process. I have, however, retained the letter-press, as forming a portion of Prinsep's numismatic essays.]

The following is the numismatical description of my medal:—

SULTÁN HUSAIN SHÁH SAFFAVÍ,
Reigned in Persia, A.H. 1106–1135, (A.D. 1694–1722).

SILVER.

LEGEND OF THE OBVERSE.

السلطان العادل الهادي الكامل الولي ابو المظفر السلطان بن السلطان

*Centre* سلطان حسين شاه ١١١٨ بهادر خان

الصفوي خلد الله ملكه و سلطانه ضرب اصفهان

REVERSE.

*Area.* لا اله الا الله محمد رسول الله علي ولي الله

*Margin.* علي حسن حسين علي محمد جعفر موسي علي

محمد علي حسن محمد

OBVERSE:—The Sultan the just, the spiritual guide, the perfect, the ruler, *Abu'l Muzaffar ul Sultán bin ul Sultán*, Sultán Husain Sháh, Behádur Khán, of the Safví race: may God perpetuate his kingdom and his dominion! Struck at Isfahán, A.H. 1118 (A.D. 1694).

REVERSE:—There is no God but God! Muhammad is the prophet of God; Alí is the favorite of God.

*Margin*:—Alí, Hasan,—Hosain, Alí,—Muhammad, Ja'far,—Músa, Alí—Muhammad, Alí—Hasan, Muhammad.

(The twelve Imáms in the order of their succession).

SPECIMEN II.

Is a coin presented to me by General Ventura to complete my series of the Pathán sovereigns of Dihlí, being the only one of the founder of that dynasty which I had yet seen. Since then Capt. Burnes has favored me with the sight of a duplicate in less perfect preservation, procured by himself, I believe, at Kabúl. I give it as a specimen of what rupography can do under the most unfavourable conditions.

The form seems imitated from that of the Abbassite khálifs, having the legend in concentric circles written in the Kufic form of Arabic. The facsimile represents exactly by the dark parts where the surface is worn smooth; however, by carefully comparing the two specimens, the whole has been made out satisfactorily with the aid of my brother, Mr. H. T. Prinsep.[1]

It is curious that the common title of *Shaháb ul din*, by which Muhammad is generally known in Indian history, does not appear on this Ghaznah dirhem, which gives him the two-fold designation of *Ghiás ul din*, 'the supporter of the faith,' and *Moaz ul násir le din*, 'the humbled of the defender to the faith'—(*sc.* to the Kaliph of

[1] [I have slightly modified Mr. Prinsep's reading.]

Baghdád). Probably the patent for the new title of *Shaháb ul dín*, 'the flaming sword of faith,' given in honour of his brilliant and destructive expeditions into India, had not yet arrived from the court of the Kaliph.[1] If so, the word *tisain* (90) in the date may be read wrong.

SHAHÁB UL DI'N, MUHAMMAD BIN SÁM,
Founder of the Ghorí dynasty of Dihlí. Reigned A.H. 588–602 (A.D. 1192–1206).
SILVER. Weight, 73.4 to 92.6 grains.

LEGENDS ON THE CONCENTRIC CIRCLES OF THE OBVERSE.

*Line* 1 هو الذي ارسل رسوله بالهدي و دين الحق ليظهره علي الدين كله ولو كره المشركون

2 لا اله الا الله محمد رسول الله السلطان الا عظم

3 غياث الدنيا و الدين ابوالفتح

4 محمد بن سام

DITTO OF THE REVERSE.

*Line* 1 ضرب هذا الدرهم في بلده غزنة سنة ستة و تسعين و خمس ماية

2 الناصر لدين الله السلطان المعظم معز

3 الدنيا و الدين ابوالمظفر

4 محمد بن سام

[The inscriptions are copied at length in plate xli.]

OBVERSE:—(From the Koran)—'It is he that sendeth his messenger for righteousness,' etc. [Surat, ix. 33, and lxi. 9.]

There is no God but God, Muhammad is the prophet of God!—The mighty sovereign *Ghiás ul dunya va u'dín, Abu'l fateh*, Muhammad bin Sám.

REVERSE:—This *dirhem* was struck in the city of Ghaznah, in the year five hundred and ninety-six.

*Al Násir le din illah* [the Khalif], the mighty sovereign, *Moaz ul dín, abu'l Muzaffar*, Muhammad bin Sám.

SPECIMEN III.

Among the coins discovered by General Ventura in the great tope at Manikyála, and described in vol. iii., pl. xxi. [v.] figs. 10 and 11, [Art. VI.], were two of the Sassanian type, having Sanskrit legends on the margin of the obverse. I did not then attempt to decipher them, nor am I aware that their explanation has been since effected elsewhere.

Captain Burnes has been so fortunate as to pick up three more of the same curious coins, in his present journey, which are now in my hands, with other rare antique produce of his successful research.

[1] [The history of this double nomenclature will be found in detail in my Essay on the Coins of the Pathán Kings of Dihlí. London, 1847.]

They have every appearance of having been extracted from some similar ancient monument; which is by no means improbable, for we may be very sure that full half of the fruits of the late explorations of the various topes have evaded the hands of their explorers, and are scattered about the country to be hereafter picked up gradually from pilgrims or professed dealers; for a trade will soon be organized in such articles, if it be not already established. There is no harm in this, as it will tend to preserve such relics from destruction; but we must for the future be on our guard against spurious specimens, which will multiply daily.

Captain Burnes' discovery has been of the greatest service toward the deciphering of the Sanskrit legend: his coins have helped me to the general purport of the marginal writing, even if they have not wholly explained its contents. I found on collating the five legends now at my command, that three of them (*vide* pl. xli.) were short of the others by two letters, which in the most perfect of Captain Burnes' coins might be clearly read as *nita* नितः. Remembering an analogous omission on one of the Gupta coins of Kanauj, wherein some specimens had the epithet *vijayaja* and others *vijayajanita*—both of the same meaning, I concluded that the preceding anomalous letter on all the coins must be a ज, and, indeed, it has no small affinity to the modern Nágari and Bengálí *j*. The two preceding syllables, again, there could be no doubt about; being in all five examples देव *deva*. Now, *devaja* and *devajanita*, 'offspring of the gods,' is the well-known epithet of the ancient Persian monarchs as well as of the Sassanian race. Thus, in the trilingual inscription on the Nakshi-rustam sculpture given in Ker Porter's travels in Persia, vol. i., 548, we have in the Greek character: ΤΟΥΤΟ ΤΟ ΠΡΟCΩΠΟΝ ΜΑCΔΑCΝΟΥ ΘΕΟΥ ΑΡΤΑΞΑΡΟΥ ΒΑCΙΛΕΩC ΒΑCΙΛΕΩΝ ΑΡΙΑΝΩΝ ΕΚΓΕΝΟΥC ΘΕΩΝ ΥΙΟΥ ΘΕΟΥ ΠΑΠΑΚΟΥ ΒΑCΙΛΕΩC, which is repeated below in two forms of Pehlvi.

The same title in Sanskrit, *devaputra shahán sháhi*, it may be remembered, is applied to the king of Persia in the Allahábád pillar inscription, as revised at p. 233, vol. i.

Again, on the Sassanian coins, read by the Baron de Sacy as far as they are published by Ker Porter (for I have not yet been able to obtain a copy of the Baron's work on the subject), the Pehlvi legend runs:

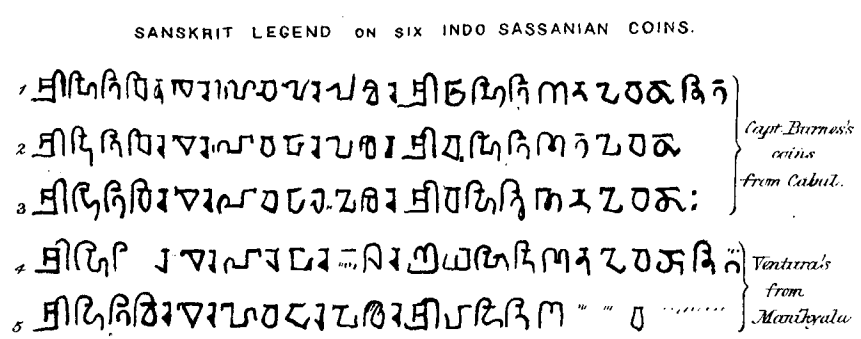
مزدزن به شهپور ملکان ملکا منوچتري من يزدان

*Mazdezn beh Shahpura malakán malaká*[1] *minochatri men yezdan.*

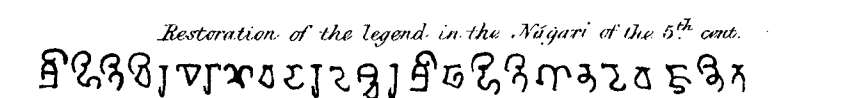
'Adorer of Ormuzd, *excellent* Shahpur, king of kings, offspring of the divine race of the gods.'

[1] In the examples given, I should read this passage—*Malakán malak Airánan*, etc.; but the Sassanian coins require study ere they can be properly made out.

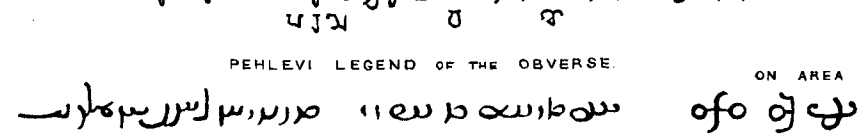
## SANSKRIT LEGEND ON SIX INDO SASSANIAN COINS.



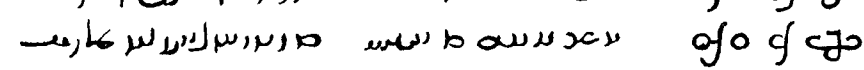

*Restoration of the legend in the Nágari of the 5th cent.*



## PEHLEVI LEGEND OF THE OBVERSE.



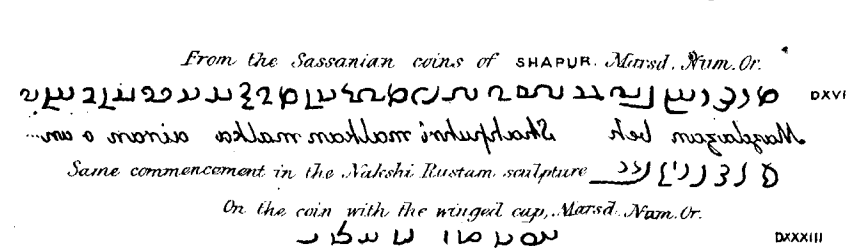

*From the Sassanian coins of* SHAPUR. *Marsd. Num. Or.* DXVI



*Same commencement in the Nakshi Rustam sculpture*

*On the coin with the winged cap, Marsd. Num. Or.* DXXXIII

*Legend on dirhem of Muhammed Bin Sám.*




after J. Prinsep.

W.West Lith.r

Published by Stephen Austin, Hertford.

The natural deduction hence was that the rest of the Sanskrit legend would also turn out to be a translation, or an imitation of the Sassanian formula; and thus, in fact, it has proved to be.

INDO-SASSANIAN DIRHEM.
SILVER. Weight, 53 grains.
LEGEND.

OBVERSE:—Head of Mithra (Ormuzd); Pehlvi very distinct, but unread; see pl. xli.

REVERSE:—On the field, three letters of an unknown alphabet (like the Armenian?) or perhaps numerals?

*Margin*:—

श्री हितिविर ऐराणच परमेश्वर श्री फा हितिगान देवजनित

*Sri hitivira Airâna cha parameswara Sri Vâhitigân devajanita.*

In this legend the only actual letters at all doubtful are the *p* and *me* of *parameswara*, and the first and last letters of the name. Indeed, the first letter is different in every example, as will be seen in the lithographed plate [xli.], as though they were all different names of the same family. Now to analyse the sentence:—

*Hitivira* I suppose to be a corrupt writing of हृदिवीर *hridivira*, 'noble in heart,' equivalent to the Pehlvi word *beh*, translated by 'excellent.' *Airâna cha parameswara*, and the supreme lord of Airân or Persia, may be read (perhaps better) *Airân va Pârseswara*, the lord of Iran and Fars. For the name, we have severally *pha, cha, va, gha*, or *hâ!* followed by *hitigân* or *hitikhân*; and, lastly, *devajanita*, as before explained.

I am quite at a loss to find owners for such names; and although this is the third time I have alluded to this coin, gaining little by little each time, still I fear we have much to learn before we can unravel its entire history. For the present I leave unnoticed the Pehlvi legend, merely placing under view in the annexed plate corresponding passages from regular Sassanian coins, which, being titles, will soon lead to a knowledge of their alphabet and meaning.

[As intimated under Art. XV. (vol. i., p. 410), I have intentionally reserved all notice of the bilingual and trilingual emanations from Indo-Sassanian mints, and their subordinate illustrative varieties, until I could associate my latest tentative readings with Prinsep's closing illustration of this interesting division of Oriental Numismatics.

I have elsewhere (vol. i., p. 65) adverted to the obstacles that present themselves to any precise definition of the permutable

letters of the Pehlvi alphabet, which may not chance to be supported by the context, or some leading indication calculated to assure its exactitude; but, in the present instance, we have to encounter dialectic modifications and transmutations from other tongues, in addition to the ignorant treatment of a language at the best but imperfectly known to us.[1] The legends I have ventured to designate as Scythic, in virtue of their seeming derivation and the assimilation of certain of their forms to the Tartar alphabets, are to this time simply unintelligible.

The classification of these complicated materials will be seen to present somewhat of a difficulty—even if the data permitted it, they could not well be adapted to any epochal order—nor do the medals sufficiently accord to follow suit under the simple typical arrangement. I am, therefore, reduced to group the different series by the linguistic test, as exemplified by the following outline:—

A. Scythic (two varieties).
A *a*. Scythic and Sanskrit.
A *b*. Scythic, Sanskrit, and Pehlvi (two varieties).
A *c*. Scythic and Pehlvi.
B. Pehlvi and Sanskrit (two varieties).
C. Pehlvi, Scythic, and Kufic.
D. Second variety of unidentified characters with Kufic.
E. Kufic (alone).

CLASS A: Unidentified characters, supposed to be Scythic. Figs. 9 and 10, pl. xvi., 'Ariana Antiqua.'

I notice the class, represented by the above cited engravings,

[1] [For example, of all those who are learned in Zend and its cognate languages—of the various Professors who edit Pehlvi texts, or who put together Grammars of that tongue—no single individual has to this day been able to add one line of translation to the bilingual inscriptions of Hâjí-âbâd (Ker Porter, pl. xv., p. 513; Westergaard, 'Bundehesh,' p. 83; Spiegel, 'Grammatik,' p. 175, etc.), beyond what De Sacy had already taught us in 1793. In brief, our power of interpretation fails us exactly where the Sassanians have omitted to supply us with the Greek translations they appended to some of the parallel texts, which, however, unfortunately extend but little beyond the titular and dynastic præordium of the inscription more immediately in question. I may, however, notice favourably Dr. Haug's tentative interpretations, confessedly incomplete as they are.]

merely as introductory to the several ramifications of the unidentified alphabet on the coins of later date, which form the subject of my present synopsis. I have to refer, however, momentarily to a still earlier exhibition of the literal series in the degradation and gradual transmutation of the original Greek legends, on the lower Kanerki coins, into the conventional forms and symbols of this system of writing—so that the Greek epigraph of PAO NANO PAO OOHPKI KOPANO degenerates into the, to us, confused jumble of signs, which the cognate characters on other medals alone teach us to look upon as real and *bonâ fide* vehicles of phonetic expression—now extant upon the pieces engraved as No. 17, pl. xiv., 'Ariana Antiqua'; No. 6, pl. xxii., *suprâ;* and No. 16, pl. xiv., 'Ariana Antiqua.'

The Sassanian proper money, more especially under reference, exemplifies the free and independent use of the debateable character, as opposed to the possible mere mechanical barbarization of a foreign tongue in the other instance, and would seem to evidence the local currency of the speech it was calculated to embody in one section at least of the dominions acknowledging fealty to the successors of Ardeslín Bálbiek.[1] Next in literal simplicity, though probably of a varied site and but little approximate period, must be quoted the series so peculiarly Indo-Sassanian in their identities, which still restrict themselves to this style of writing—Nos. 19, 20, 'Ariana Antiqua,' pl. xvi.

The Indo-Sassanian money with unmixed Sanskrit legends has already been adverted to, but further examples of the subordinate classes may be consulted under the following references:—'Ariana Antiqua,' pl. xvi., fig. 18 (षहि); ibid, pl. xvii., fig. 11, and pl. xxi., fig. 20; 'Jour. Roy. As. Soc.,' vol. xii., pp. 341, 342, etc.; 'Ariana Antiqua,' pl. xvi., fig. 8.

CLASS A *a*: (Bilingual Scythic and Sanskrit). Type, fig. 6, pl. xvii., 'Ariana Antiqua.'

[1] [Other specimens of money bearing these peculiar legends may be seen under 'Ariana Antiqua,' pl. xvii., Nos. 12 to 15.]

OBVERSE:—Head facing to the right.

LEGEND in unidentified characters. 'Jour. Roy. As. Soc.,' vol. xii., pl. iii., fig. 21.

REVERSE:—Fire altar and supporters about the pedestal of the altar श्रीटटे | षहि श्री?

CLASS A *b*: (Trilingual, Scythic, Sanskrit, and Pehlvi?). Pl. v., figs. 10, 11; and pl. xli., figs. 1 to 5.[1]

OBVERSE:—Device, as in the plate; the tiger-crest is less obscure on other coins.

*Centre*:—Unidentified characters.

*Margin*:—Legend also of doubtful import, but expressed in Sanskrit letters.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

श्रीहितिविरखरलाचपरमेश्वरश्रीषाहितिणतदेवनारित

The above transliteration, based upon mechanical configurations alone, gives the preferable reading of each character, deduced from a collation of the legends on the numerous coins extant. As the language this legend embodies is, up to this time, unknown to us, there are no precise means of selecting the intentional as opposed to the technically rendered letters. For instance, it is doubtful whether the 6th form should be taken to stand for ख, ऐ, or वे. The 9th letter may be only one of the frequently recurring व's; but I read it as च, in accord with Prinsep, on the authority of one of Sir A. Burnes's coins (now in the possession of General Fox), which gives the character with more than usual distinctness. In the letters 10 to 14, I again follow Prinsep, on the principle of the probability of the combination rather than upon the positive assurance of the imperfectly discriminated letters which compose the word. And, with some such similar tendency, I formerly proposed the substitution of ष as the modern representative of No. 16, in preference to the optional फ or व of my author's text, a conjectural emendation since amply confirmed by the configuration of the letter in question on one of Colonel Lafont's coins in the British Museum.

[1] [Also 'Journal Asiatique,' vol. vii. (1839), pl. xvii., p. 34; 'Ariana Antiqua,' pl. xxi., fig. 22; 'Jour. Roy. As. Soc.,' vol. xii., pl. iii., figs. 17 to 20.

Suffice it to say, that if there is little to be said in favor of these definitions, there is no inconsistency or literal difficulty to stand in the way of their acceptance with the values now suggested.

REVERSE:—

To the left . . Pehlvi 𐭮𐭦𐭱 𐭮𐭦𐭱𐭮𐭦𐭱 𐭮𐭦𐭱

سف تنسف تیفّ

To the right . Pehlvi 𐭧𐭥𐭫𐭥 𐭧𐭥𐭫𐭥𐭧𐭥𐭫𐭥 𐭧𐭥𐭫𐭥𐭧𐭥𐭫𐭥𐭧𐭥𐭫𐭥

. . . . خراسان ملکا

In regard to the Pehlvi legend on the left, I have elsewhere[1] explained my reasons for differing from Olshausen's original interpretation of هفتاد هفت *seventy-seven*.[2] His rendering of the final word to the right is faulty, but the second name I consider indubitable; and, like him, I fail at the opening term, though I incline to identify it with the title of طرخان,[3] in preference to supposing it to be the name of the Suzerain ruler of Khorásán.

CLASS A *b*: Variety. Pl. xxxiii., fig. 6.

OBVERSE:—As in Prinsep's engraving. The better preserved specimens exhibit a crest above the wings here visible, in the form of a tiger's head.

Sanskrit legend to the right . . . . . श्री वहार

to the left . . . . . वखुदेव

*Margin*:—Legend in unidentified characters. (See 'Jour. Roy. As. Soc,' vol. xii., pl. iii., fig. 8).[4]

The Sanskrit legends on the obverse of these coins are indeterminate. Prof. Wilson proposed to amend Prinsep's original reading (vol. i., p. 412) to श्री वह्मन वसुदेव, adding, 'the latter word is unequivocal, but the two last letters of *Bahmana* are doubtful.'

[1] ['Jour. Roy. As. Soc.,' vol. xii., p. 344.]

[2] ['Die Pehlewî-Legenden,' Kopenhagen, 1843, p. 60; and 'Numismatic Chronicle,' vol. xi., p. 133.]

[3] [*Cf.* 'Gildemeister Scriptorum Arabum de rebus Indicis,' Bonn, 1837, p. 6; 'Tabari' MS., cap. 115; Haji Khalfa, A.H. 86; 'Abulfaraj,' pp. 116, 183, Pocock, Oxon.; St. Martin, 'Arménie,' vol. ii., p. 18; 'Ibn Khordâbah' MS., Bodl., No. 433; Masaudi, 'Meadows of Gold,' p. 369.]

[4] [See also 'Ariana Antiqua,' pl. xvii. fig. 8.]

REVERSE :—

To the left . افزو = 𐭩𐭦𐭪𐭥

To the right . پون شم دات = 𐭯𐭥𐭭 𐭱𐭬𐭬 𐭩𐭦𐭪

*Margin* :—Legend similar to that on the obverse exergue.

CLASS A *c*: (Bilingual, Scythic and Pehlvi).

To complete the classification, I refer to two coins as yet incompletely deciphered in the Pehlvi, and altogether unintelligible in their Scythic legends, a description of which will be found at p. 332, 'Jour. Roy. As. Soc.,' vol. xii.

VÁSU-DEVA.

CLASS B: (Bilingual, Pehlvi and Sanskrit).

Prinsep's delineation, pl. vii., fig. 6,[1] sufficiently displays all the typical details of these pieces; I have merely to deal with the legends.

OBVERSE :—To the right of the figure is Pehlvi, but illegible in the specimen engraved.

*(Increase)* افزوت . . . = 𐭩𐭦𐭪𐭥 𐭩𐭦

To the left . . . 𐭩𐭦 𐭩𐭤𐭤 𐭩𐭤𐭤 .

سف ورسو تيف

Or *Siv Varsú tef* for *Sri Vásu deva.*

*Margin:*

𐭩𐭦𐭪𐭥 𐭱𐭬𐭬 𐭯𐭥𐭭 𐭩𐭤𐭤 𐭩𐭤𐭤 𐭩𐭤𐭤 𐭩𐭦𐭪𐭥 𐭩𐭤𐭤 𐭩𐭤𐭤 𐭩𐭤𐭤 𐭩𐭦𐭪𐭥

پون شمي دات سف ورساو تيفّ وهمان اچ ملتان ملكا

'In nomine justi judicis,'[2] Siv Varsáo tef, Brahmán, King of Multán.

[1] [Other engravings and facsimiles may be consulted in 'Ariana Antiqua,' pl. xvii., fig. 9; 'Jour. Roy. As. Soc.,' vol. xii., pl. iii., figs. 9 to 15.]

[2] [The usual formular opening, corresponding with the Arabic بسم الله. See Anquetil 'Zend Avesta,' vol. ii., p. 341, correctly 𐭩𐭦𐭪𐭥 𐭱𐭬𐭬 𐭯𐭥𐭭 M. Spiegel does me but bare justice when he concludes that I was unaware of his previous decipherment of a portion of this marginal legend when I published my first paper on the subject in the pages of the 'Jour. Roy. As. Soc.,' vol. xii., p. 343. In truth, in those days, I was but as little in the way of seeing German books, as I have limited facility of reading them now; but I quoted, with full and deserved commendation, Prof. Olshausen's treatise, and noticed all other continental works, referring to the subject, of which I was able to obtain knowledge. In his 'Grammatik der Huzvâreschsprache' (Wien, 1856), M. Spiegel reclaims the title to priority of interpretation of the opening portion of this sentence, which it seems appeared in May, 1844 ('Jahbr. für wissenseh-Kritik.' Mai, 1844, p. 703). And, further, he desires to

REVERSE :—

To the right श्री वासु देवः ॥
*Śrí Vásu deva.*

To the left . . . 𐭥𐭩𐭱𐭮 𐭪𐭠𐭤𐭮𐭤𐭩𐭱𐭮
پنچاي زاولستان

*Margin* . . . 𐭦𐭩𐭤𐭠𐭤𐭩𐭱𐭮 𐭪𐭥𐭩𐭱𐭮

It will be seen that these coins are not very exact in the Pehlvi rendering of the initial invocation, and there are other signs of indeterminate orthographical expression in the indifferent insertion or omission of the redundant 𐭭 =ن, or final stop, after the 𐭤𐭮𐭩 and the 𐭩𐭱𐭤 in the obverse marginal inscription. I have to acknowledge, though I will not attempt to explain, a more obvious divergence, recurring without exception, in the transliteration of the Sanskrit name वासु *Vásu*, which is reproduced as 𐭥𐭠𐭤𐭮 and 𐭥𐭠𐭤𐭮𐭤, in conflicting contrast in the duplicate record on the obverse surface.

A coin, in the possession of Colonel Abbot, equally evincing this peculiarity in its well-executed but now abraided Pehlvi legends, displays the Sanskrit श्री वासु देवः under a negative aspect, that is to say, as legible on the original die, but reversed on its stamped produce. With the above exception, I have not much doubt about the obverse renderings, nor do I distrust the inter-

correct my reading of 𐭤𐭮𐭩 𐭥𐭠𐭤𐭮 𐭩𐭱 into פון שמי יאת. I am not disposed to concede this point, as, apart from the greater probability of the employment of the former formula, the consistency of literal configuration, as developed by the coins, is opposed to the transmutation of the Pehlvi 𐭮 of 𐭤𐭮𐭩 into the optional and convertible 𐭭 of the more modern system of writing. I may remark, in conclusion, that an author who is disposed to exact so rigorously his own dues, in such insignificant matters, should have been more precise in his apportionment of the credit of discovery by others. For instance, I find, at p. 26, my alphabets ('Jour. Roy. As. Soc.,' vol. xii., p. 262), assigned to another person. At pp. 27, 32, a complete ignoring of my remarks on the formation of the final 𐭭 ('Jour. Roy. As. Soc.,' vol. xiii., p. 379), which the author does not very satisfactorily exemplify from his own materials; and at p. 176, my rectification of the so-long misunderstood word, on the reverse of the earlier Sassanian coins, and its determination as נוואזי *Nowází* ('Jour. Roy. As. Soc.,' vol. xii., p. 387; 'Numismatic Chronicle,' vol. xv., p. 181), is quoted as Dr. Mordtmann's, notwithstanding that the latter had acknowledged my initial decipherment, and entered into some controversy as to my idea of the derivation of the word (Zeitschrift d. D. M. G. viii. 32).]

pretation of the name of زاولستان *Záúlistán* on the reverse;[1] but the word that precedes it still continues an enigma, and I hesitate to propose for acceptance either the geographical definition of پنجواي[2] the old capital of Arachotia, a religious association with the Sanskrit पूजा *worship*, or a temporal indication of rulership, of which this may be the undeciphered exponent.

In typical design these coins are in a measure connected with an exceptional style of Sassanian money,[3] attributed to Khosrú II. (A.D. 591—628). The obverse head on these innovations has but little identity with that on the Indo-Sassanian pieces, and is only associated with the device of the latter in the novelty of the front face. The reverse figure, on the other hand, accords exactly with the bust on the eastern money. I have not myself had an opportunity of examining any one of the few extant pieces of the former class, and rather hesitate to propose decipherments on the strength of mere engravings; but as there is only one word about which there is any doubt, I may reproduce the legends as follows:—

OBVERSE:

To the left (with the usual monogram) [illegible] ,

To the right . . . [illegible]

هوسروي ملكان ملكا

[1] [I would note *en passant* the entire absence of the Pehlvi ل = ب in these legends, the ا = و, the Sanskrit व uniformly supplying its place as in the Vendidád, Zend, *Vêekerêânte;* Pehlvi, *Kawul.*—'Anquetil,' vol. i. 267.]

[2] [Rawlinson, 'Jour. Roy. As. Soc.,' vol. xi., p. 126; 'Abulféda,' ٣٤٣. ٣٥٦; 'Journal Asiatique,' vol. x., p. 94; *Pangoui;* Reinaud, 'Fragments,' p. 114; 'Ayín-i Akbarí,' vol. ii., p. 167.]

[3] [See Ouseley, 'Medals and Gems' (London, 1801), No. 8; 'Jahrbücher' (1844), No. cvi., p. 29, pl. No. 7; Longperier, pl. xi., fig. 3; Olshausen, p. 65; 'Numismatic Chronicle,' vol. xi., p. 137; Mordtmann, 'Zeitschrift,' p. 138. Ker Porter gives an engraving of a coin with a similar obverse, pl. lviii. fig. 18. *Reverse:* 'A single upright figure, . . . executed in a very barbarous style, having a chump-headed, dwarfish effect.'—vol. i., p. 133. Longperier's No. 4, pl. x., from the cabinet of the Duc de Blacas, is identical in its types: the author assigns this piece to Khosrú I. Dr. Mordtmann follows this attribution, and interprets the legends—*Obverse:* חוסרוי אפזוד. *Reverse:* גהאר סיה (=34) הוסרוי, with a conjectural addition of 'Iran afzud Kirman.'—p. 93. It is a question with me whether this coin is not due to Khosrú II. rather than Khosrú I.]

REVERSE:

To the left . . . هفت سيه = [illegible]
(An: 37 of his reign.)

To the right . —— [illegible]
ايران افروت . . . .

Dr. Mordtmann reads the final word, omitted in the above, as אוזינא, *Uzaina* Chuzistan. I certainly should not thus transcribe the letters as they appear on the Jahrbücher coin; and, possibly, if I did so, I might dissent from the present interpretation: however, as I am not prepared to set copies against originals, I abstain from further comment.

CLASS B: Variety. (Bilingual, Pehlvi, with Sanskrit mint-marks?). Plate xxxiii., fig. 3.[1]

OBVERSE:

Pehlví legend وفكي ملكا or نپكي ملكا = [illegible]

The initial letter is convertible as و or ن, and is frequently either omitted altogether or inserted in the field apart from its succeeding [illegible]. The [illegible] itself is often degraded into a double loop, which alters its character completely. The [illegible], or *k* with E *final*, there is no doubt about; and the strange combination that follows, which, in many instances, expresses nothing but [illegible] = مزد, proves to be a mere bungling formation of the letters [illegible] = ملك, the ل being elongated by the addition of the tail stroke, which properly belongs to, and is the distinguishing mark of the [illegible] as opposed to the old Sassanian [illegible]. The final [illegible] of [illegible] usually appears on the left of the bust.[2]

CLASS C: (Trilingual, Pehlvi, Scythic, and Kufic).

I do not design to reproduce any detailed description of the

[1] ['Ariana Antiqua,' pl. xvii., figs. 5, 7, 10, etc.]

[2] [M. de Longperier attributed one of these coins to Hormusdas III., interpreting the Pehlvi as [illegible] = اوهريمزد (Médailles de la Dynastie Sassanide, Paris, 1840, pl. i., fig. 1, p. 56). Dr. Mordtmann, again, assigns a coin, similar in its typical style to No. 10, pl. xvii., 'Ariana Antiqua,' to Azermidukht, pl. ix., fig. 31, p. 194, Zeitschrift, etc.]

coins I would group under this heading; a delineated specimen of the class may be consulted in fig. 4, pl. xvii., 'Ariana Antiqua';[1] and my own attempts at their decipherment, together with facsimiles of the legends, are to be found at p. 329 *et seq.*, vol. xii., 'Jour. Roy. As. Soc.'

I advert to them now merely to complete the reference to the several series connected by similarity of linguistic legends with classes B, and B variety, above noticed.

Silver: weight, 58.4 grains. British Museum.

OBVERSE:—The usual linear imitation of the old Sassanian head, as adopted by the Arabs.

To the left: The standard monogram and [illegible]

To the right: Legend in unidentified characters, of the same style as in classes A, B.

*Margin*:—In Pehlvi letters [illegible], and in Kufic letters the words بسم الله.

REVERSE:—The ordinary fire-altar and supporters.

To the left . . سشست = [illegible] = *Sixty-three* A.H.

To the right . . خبس = [illegible] *Khubus.*[2]

*Margin*:—

Upper compartments: unidentified characters as on obverse.

Lower compartments:

To the left . . . . The standard monogram.

To the right . . . . افزو = [illegible]

Doubtful dates, 68 A.H. and 69 A.H.

CLASS D: (Bilingual, variety of unidentified character with Kufic).

To bring under one view the various transitional modifications of Sassanian money that may, by any possibility, bear upon the mixed series already noticed, I would advert to two subordinate classes, the first of which seems in its alphabetical devices to pertain to more westerly nations, though the sites of

[1] [See also Olshausen, German text, p. 56: 'Numismatic Chronicle,' vol. xi., p. 130.]

[2] [Khubus in Kermán, see Ouseley (خبيص) 199; 'Abulféda,' p. 442; Marco Polo *Kobinam*, p. 107.]

discovery connect it with the Central Asian types above enumerated.

Facsimiles of four of these pieces are given in Frœhn's 'Die Münzen (1832) Nos. 434, 435, pl. xvi., figs. א and ב; and 'Jour. As. Soc. Beng.,' No. 101 (new series), pl. iii. figs. 6*a*, 7. Here again the epigraphs are bilingual; the legend on the right appears to read from the outside, commencing at the front point of the tiara, and the forms of the letters give it a decidedly Phœnician aspect, though for the present their elements defy decipherment. The short word on the left of the Sassanian crown is expressed in Kufic letters, its foot-lines being towards the centre of the piece. Professor Frœhn conjectured that the combination on fig. א might be resolved into the title of المهدي the Khalíf (A.H. 158—169 A.D. 774—785), and this interpretation receives confirmation from a more legible specimen of the coinage lately acquired by the British Museum.[1] On fig. ב and other coins the word appears to be composed of the letters سلي or سحي; but on an unpublished specimen of Colonel Anderson's the name is fairly legible as محمد which, it will be remembered, was Al Mahdí's proper designation.[2]

Class E: Kufic (alone).

I complete the series with a set of medals having many characteristics in common with the money classified under the heading D, though it is a question whether in point of antiquity they are not entitled to take precedence of their bilingual counterparts. The connexion and association between the two is marked both in the general design of the obverse device, and more distinctly in the distribution of the symbols on the reverse, where Ormazd's head, rising from the flames of the fire-altar, pronounces them either derivatives from a common stock, or imitations the one of the other. The peculiarity of the coins of Class E, however, consists in their having attained to the correct

[1] [Major Cunningham's collection.]

[2] [Price's 'Mahommedan Hist.,' ii. 23. Frœhn, 'Recensio,' p. 24, etc. 'Handbuch zur Morgenländischen Münzkunde,' Stickel Leipzig (1845), p. 50.]

exhibition of Kufic legends, pure and simple. The earliest published piece of this class is also to be found in Professor Fræhn's comprehensive works.[1] The exergue on the obverse was read by that accomplished scholar as

بسم الله محمد رسول الله الخاقان الاعظم جمال امير المومنين

To this I am able to add from coins in the possession of Col. Abbott (1), and Capt. Hay (3), the novel, though imperfectly deciphered, legends—

OBVERSE:—

بسم الله محمد رسول الله حمدله مما امربه الامير علي سلمن اله

The concluding words on other specimens seem to read . . . سلمرلله; and in one instance . . . . سلمراله.

On the reverse the pedestal of the altar is formed of the word علے.

CLASS E: Variety.

TALHAH BIN TÁHIR, A.H. 209 to 213.

Copper: size, 5½; weight, 30 (and 31) grains. A.H. 209.

Two specimens, British Museum (Cunningham collection).

OBVERSE:—

*Centre:* لااله الا اللهُ وحده لاشريك له

*Margin:* بسم الله ضرب هذا الفلس بعبر سنة تسع و ماتين

REVERSE:—Central device, a barbarized Sassanian head, to the right, with the usual flowing backhair, and traces of the conventional wings above the cap; the border of the robe is bossed or beaded.

In front of the profile is the name الطلحة

*Margin:* محمد رسول الله مما امربه الامير طلحة علي يدي عبدالله

I have two difficulties in regard to the above transcript from the original Kufic. The one in respect to the name of the place of mintage, which is visible on only one of the two specimens quoted, and is there somewhat confused in the original definition of the several letters, and otherwise obscured by oxydation. The third and fourth upright lines are opened out, or slanted away from one another, towards the top, which usually indicates

[1] ['Novæ Symbolæ ad rem Numariam Muhammedanorum Petrop,' 1819, p. 45, pl. ii., fig. 14.]

the letter ع; though this sloping off may, perhaps, be a mere fortuitous imperfection of the die-engraving, the final letter is best represented by a modern ر, though it may, if needful, be converted into an ل.

The second point is of less consequence, and extends only to the almost invisible outline of the word I have supplied by يدي, under the requisitions of sense rather than on the absolute authority of the single coin which retains in any degree of distinctness that portion of its mint impress.

## BRÁHMANÁBÁD COINS.

I am anxious to refer, even though momentarily, and in a necessarily imperfect manner, both from the condition of the materials and the want of preparation on my own part, to an interesting series of Indian coins that have only lately been brought to light during the excavation of an inhumed city in the province of Sindh, which Mr. Bellasis, its enterprising explorer, designates, perhaps somewhat prematurely, by the title of the ancient Bráhmanábád.[1]

However, be the site what it may, the laying open of this ruined town has made us acquainted with a class of essentially local money, of which the circle of our Oriental numismatists had previously no cognizance. Unfortunately, for the due and full explication of their historical position, the pieces obtained from this locality are nearly, without exception, of copper; and, in common with their more rare associates of silver, have suffered to an unusual extent during their prolonged entombment.

The general character of the coins, numbering some thousands, and in mere bulk sufficient to fill a 28 lb. shot-bag, is decidedly exclusive, involving Kufic legends with occasional provincial devices, and pertaining, as I suppose, to the Arab

[1] [Its exact position is stated to be 47 miles N.E. of Haidarábád. An account of the city of Brâhmanábád was first published by Mr. A. F. Bellasis in Bombay in 1856. A paper by Col. Sykes, on the same subject, appeared in the *London Illustrated News* of Feb. 21, 1857; and Mr. Bellasis' plans and sections in the number for the 28th of the same month.]

potentates of Mansúrah, who ruled over the lands of the lower Indus after the decay of the central power of Mohammedanism at Baghdád. The money of Mansúr bin Jamhúr (منصور بن جمهور الكلبي),[1] the last Governor on the part of the Umaiyid Khalífs (about 750 A.D.), heads the list. I do not advert to the earlier coinages of central Asia, which have been transported, in the ordinary course, to the site of their late discovery; but commence the series with the coins which bear on their surfaces the earliest extant mention of the celebrated capital Mansúrah, the Arab reproduction of the still more famed Bráhmanábád of classic renown.[2]

[1] [See 'Baládari,' Reinaud's 'Fragments, 'Arabes et Persans relatifs a l'Inde,' Paris, 1845, p. 211.]

[2] ['Amrou, fils de Mohammed fils de Cassem . . . . . fonda, en deçà du lac, une ville qu'il nomma Almansoura. Cest la ville où résident maintenant les gouverneurs.'—p. 210. In a previous passage, Baládari tells us, 'Ensuite Mohammed fils de Cassem, se porta devant la vieille Brahmanabad, qui se trouvait à deux parasanges de Mansoura. Du reste Mansoura n'existait pas encore, et son emplacement actuel était alors un bois. . . . . Mohammed plaça un lieutenant à Bahmanabad; mais aujourd'hui la ville est ruinée.'—Reinaud, p. 198. The Arabic author from whom these facts are derived, named احمد بن يحيي البلاذري, died in 279 A.H. or 892 A.D. See also Reinaud, quoting Albirúní's 'Tárikh-i-Hind Fragments,' p. 113. The MS. of the latter author's Kánún has the following:—

بيمنوا و هي منه الكبري و سميت منصورة لان فاتحها قال نصرت

Jaubert, in his translation of Edrisi, on the authority of the original, states that the local native name of the place was ميرمان. Masúdi tells us, 'I visited Multán after 300 A.H., when ابو الدلها ت المنبه بن أسد القرشي السامي was king there.' At the same time I visited el Mansúrah, the king of that country was then ابو المنذر عمر بن عبدالله, [of the family of Habbár ben el Aswad.']—p. 385, Sprenger's Translation. Again, with regard to the extent and importance of the kingdom, we are informed, 'All the estates and villages under the dependency of el-Mansúrah amount to three hundred thousand; the whole country is well cultivated, and covered with trees and fields.'—p. 386, *ibid.* Further references to the geographical and other questions involved will be found as follows:—Vincent's 'Commerce of the Ancients,' London, 1807, vol. i., p. 145. Gladwin's 'Ayín-i-Akbarí,' vol. ii., p. 137, *et seq.* 'Marásid-al-Itala',' vol. ii., p. 161. 'Istakrí' (A.H. 300 to 309), 'and Sind is the same as Mansúrah . . . . . Mansúrah which they call Sindh.'—pp. 12 and 147. Ouseley's 'Oriental Geography' (London, 1800). 'Ibn Hankal' (A.H. 331 to 366). 'Gildemeister de rebus Indicis' (Bonn, 1838), p. 166. Col. Anderson's Translation, 'Jour. As. Soc. Beng.,' vol. xxi., p. 49. Reinaud's 'Géographie d'Aboulfeda,' vol. i., p. 386, etc. 'Liber Climatum Arabic Text,' J. H. Mæller, Gothæ, 1829. Reinaud's 'Mémoire sur l'Inde,' p. 235. 'Ancient Accounts of India and China,' London, 1733; ditto, Reinaud's edition, Paris. Elliot's 'Historians of India,' Calcutta, 1849. Elliot's 'Appendix to the Arabs in Sind,' Cape Town, 1853. 'Ariana Antiqua,'p. 413. 'Jour. As. Soc. Beng.,' vol. vii., pp. 93, 279; vol. x., p. 183; vol. xiv., p. 75. McMurdo, 'Jour. Roy.

I should be disposed to conjecture a considerable interval to have elapsed between the issue of this currency and that bearing devices somewhat in common, which displays the name of Abdulrahman (No 3 *infrâ*), but I am not now in a condition to enter into any satisfactory speculations as to the precise identity of this monarch, or the dates of any of his successors, whose names can be but faintly traced on the worn and corroded surfaces of the coin, submerged with the town of which it necessarily constituted the bulk of the then existing currency. I await, in short, the further supplies of better specimens, promised me by the energetic antiquarians on the spot,[1] and, individually, more leisure to look up the rather obscure history of the divisional government which these coins represent.

I have one remark to add in reference to the peculiarly local character of these numismatic remains, and the restricted antiquity of the town, as tested by the produce of the habitations hitherto penetrated, in the fact of the very limited number of Hindú coins found among these multitudes of medieval pieces, and that even these seem to be casual contributions from other provinces, of no very marked uniformity or striking age.

MANSUR.

No. 1, Copper: weight, 33 grains; size 6.

OBVERSE:—

*Area:* لااله الا الله وحده لاشريك له

*Margin:* Illegible.

REVERSE:—

*Area:* Central symbol nearly effaced, above which appears the name محمد, and below the words رسول الله.

*Margin:* بسم الله ضرب [هذا الفل]س بالمنصورة مما امر به منصو (*sic*)

As. Soc.,' vol. i., p. 23 *et seq.* Burnes' 'Bokhára,' vol. iii., p. 31. 'Jour. Roy. As. Soc.,' vol. i., p. 199. Postan's 'Observations on Sindh,' p. 143. Pottinger's 'Beloochistan and Sinde' (London, 1816), p. 381. Wood's 'Oxus' (London, 1841), p. 20. Mohammed Ma'súm's 'History of Sind,' A.D. 710 to 1590. 'Bombay Government Selections,' new series, No. xiii. (1855).]

[1] [Messrs. Frere, Bellasis, and Gibbs, of the Bombay Civil Service.]

No. 2:

OBVERSE:—Device altogether obliterated.

REVERSE:—

*Area:* Central symbol in the shape of an elongated eight-pointed star: above, محمد; below, رسول الله.

*Margin:* (*sic.*) بسم[الله] ضرب هـ بالمنصورة مما امربه منصو

ABDULRAHMAN.

No. 3, Copper: size, 5; weight, 44 grains.

OBVERSE:—Central device, a species of quatrefoil, or star with four points, on the sides of which are disposed, in the form of a square, the words محمد رسول الله عبدالرحمن. The outer margin of the piece is ornamented with a line of dots enclosed within two plain circles, with four small dotted semicircles to fill in the space left vacant by the angular central legend.

REVERSE:—A scalloped square, surrounded by dots, within which, arranged in three lines, are the words بالله عبدالرحمن لسلعار; the concluding word I am unable satisfactorily to decipher, it is possibly the name of Abdulrahman's tribe.

MUHAMMED.

No. 4: A unique coin of apparently similar type—though with an obverse absolutely blank—replaces the name of Abdulrahman on the reverse by that of Muhammed. The concluding term is identical with the combination above noted.

ABDALLAH.

No. 5: Copper.

OBVERSE:—Device as in No. 3 (Abdulrahman).

LEGEND: محمد [رسول الله] عبدالله

REVERSE:—Blank.

No. 6. Copper: size, $3\frac{1}{2}$; weight, 18 grains.

OBVERSE: Central device as in No. 3, around which in a circular scroll may be partially read the formula لا اله الا الله وحده لاشريك له.

REVERSE:—Centre device composed of the name of عبدالله *Abdallah*; the two portions عبد and الله being crossed at right angles, in somewhat of accord with the scheme of the obverse device.

The marginal legend is arranged in the form of a square and consists of the words محمد رسول الله [الا]مير.

No. 7. Silver: size, 2; weight, 8·4 grains.[1] Devices are discontinued and replaced by simple Kufic legends, as follows:

OBVERSE :— لااله الا الله وحده لاشريك له

REVERSE :— محمد رسول الله الامير عبدالله

No. 8. Copper, of similar legends. Other specimens vary in the division of the words, and omit the title of *Al Amír*.

## OMAR.[2]

No. 9. Silver: size, 1½; weight, 9 grains. Five specimens.

OBVERSE :—No figured device. Legends arranged in five lines.

بالله محمد رسول الله عمر

Marginal lines, plain or dotted, complete the piece.

REVERSE :—Kufic legends alone in three lines.

بالله بنو عمرويه النصر[2]

No. 10. Copper: size, 4; weight, 35 grains. Common.

Legends as in the silver coins, with the exception that the بنو is placed, for economy of space, in the opening between the لـ's of بالـله. The die execution of these pieces is generally very inferior.

No. 11. Copper: size, 3½; weight, 21 grains. Unique.

OBVERSE :—Blank.

REVERSE :—

*Centre :* بنو —— عمروية النصر

*Margin :* ? —— س بالمنصورة سنة اربع ——

## OMAR (?)

No. 12. Copper: size, 4½; weight, 36 grains. Mr. Frere, unique.

[1] [Among the silver coins exhumed from the so-called Bráhmanábád some are so minute, as to weigh only 1·2 gr.]

[2] [I am inclined to identify this ruler with the Omar bin Abdallah, above indicated as the reigning sovereign of Mansúrah, at the period of the geographer Masúdí's visit to the valley of the Indus, and of whom he speaks further in the following terms:—'There is some relationship between the royal family of el-Mansúrah and the family of esh-Shawárib, the Kadi, for the kings of el-Mansúrah are of the family of Habbár ben el-Aswad, and have the name of Beni 'Amr ben 'Abd el-Ayíz el-Karshí, who is to be distinguished from 'Amr ben 'Abd el-Ayíz ben Merwán, the Omaïyide (Khalif)'.—Sprenger's 'Meadows of Gold,' p. 385. See also Gildemeister, quoting 'Ibn Hankál,' p. 166, and Elliot, citing the same author ('Historians of India'), p. 63.]

OBVERSE:—Central device, four lines crossing each other at a common centre, so as to form a species of star of eight points; four of these are, however, rounded off by dots.

LEGEND, arranged as a square:

محمد رسول الله ـــر

with single dots at the corner angles, and two small circles filling in the vacant spaces outside of each word.

*Margin*: Two plain lines, with an outer circle of dots.

REVERSE: Central legend in three lines within a triple circle composed of dots, circlets, and an inner plain line. I transcribe the legend, with due reservation, as:

بنه بالله عمرويه النصر

# XXI.—ADDITIONS TO BACTRIAN NUMISMATICS, AND DISCOVERY OF THE BACTRIAN ALPHABET.

(JULY, 1838.)

IT is not an easy matter to gratify my numismatological readers with a plate of entirely new Bactrian coins so frequently as they would wish; for, independently of the time and labour requisite for engraving them, the subject, as to new names at least, may be looked upon now as nearly exhausted. Opportunities, however, still occur of verifying doubtful readings, of supplying names where they were erased or wanting in former specimens, and of presenting slight varieties in costume, attitude, and other particulars, which tend to complete the pictorial history of the Bactrian coinage.

For these several objects I enjoyed a most favorable opportunity during the visit of General Ventura to Calcutta last winter; his second collection, though possessing few types or names absolutely new, boasted of many very well preserved specimens of the small silver coinage of Menander, Apollodotus, Lysias, Antimachus, Philoxenes, etc. The General most liberally conceded to me, from his abundant store, several that were wanting to my own cabinet, both of silver and

copper; and he placed the rest also at my disposal, to draw, examine, and describe, as I might feel inclined. Unfortunately, I refused to take charge of the Indo-Scythic gold series for examination, finding nothing particularly new among them, the consequence of which was that the whole were stolen by some sharper at the hotel where the General was residing, and none have since been recovered! I am now speaking of last January! Since then I have received a coin and drawings of several others from Gen. Court; also two or three from Gen. Allard; and, latterly, the whole produce of Capt. Burnes' search in the neighbourhood of Kábul have been entrusted to my care. It is the very latest arrival from him (or rather from a valuable member of his expedition, Dr. Lord), consisting of two beautiful coins of Eucratides, that stimulates me at once to give forth all that have accumulated in my Bactrian drawer since I last wrote on the subject. I must give Dr. Lord's coins the first place, because one of them is, perhaps, the most curious and important that has yet fallen into our hands.

Plate xlii. contains etchings of both of these coins to which I would thus draw prominent attention. Dr. Lord thus describes the place and circumstances of their discovery:—

'I do myself the pleasure to forward two coins, which I have been so fortunate as to find during my late visit to Turkistán. The double-headed coin I found at Tash Korghán, the other at Kundúz.'

Fig. 2 I need not particularly describe, as, though new to us, it has been published from other specimens in France. The reverse has a naked figure of Apollo in lieu of the Dioscuri.

Fig. 1 is an unique medallion (that is, a tetradrachma) of Eucratides.

OBVERSE:—A fine youthful head and bust of the king wearing a plain steel helmet, with the bands of the diadem protruding behind.

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On the area above and below—ΒΑΣΙΛΕΥΣ ΜΕΓΑΣ ΕΥΚΡΑΤΙΔΗΣ in the nominative case.

REVERSE:—Busts of a man and a woman looking to the right: hair simple and without diadem; legend above ΗΛΙΟΚΛΕΟΥΣ, below ΚΑΙ ΛΑΟΔΙΚΗΣ.

Supplying the word *υιος*, we have here the parentage of Eucratides developed in a most unexpected way: 'The great king Eucratides, son of Heliocles and Laodice.' The former is a well-known Greek name, but it is evident from the absence of title and diadem that he was a private person, and yet that his son, having found his way to the throne, was not ashamed of his unregal origin.[1]

I have long been pledged to my readers to give them a new alphabet for these Bactrian legends, and I think the time has now arrived when I may venture to do so; or at least to make known the modifications which have been elicited by the abundance of fresh names and finely preserved specimens which have passed under my eye since that epoch. It must be remembered that the only incontestible authority for the determination of a vowel or consonant is its constant employment as the equivalent of the same Greek letter in the proper names of the Bactrian kings. Beyond this we have only analogies and resemblances to other alphabets to help us, and the conjectural assumption of such values for the letters that occur in the titles and epithets of royalty as

[1] [I have omitted some of Prinsep's original speculations in regard to the Indian origin of Eucratides' mother, that he was led into by the faulty drawing of the coin supplied to him by Mr. Masson, and which the sealing wax impression of the original in his possession did not enable him to rectify until new information reached him at the moment of the publication of the current number of the 'Jour. As. Soc. Beng.,' when the error was unhesitatingly corrected by a fly-leaf note.]

may furnish an admissible translate of the Greek in each and every case.

It will be my object presently to show that this can be done, as far as the coins are concerned, by means of the Sanskṛit or rather the Pálí language; but in the first place it will be more convenient to bring forward my revised scheme of the alphabet as far as it is yet matured. Unfortunately the exceeding looseness of orthography and caligraphy which could not but prevail when one foreign language (for such it was to the Greek die-cutters) was attempted to be rendered by the ear in another character, equally foreign to the language and to the scribes, with abundance of examples before me, renders it almost impossible to select the true model of some letters for the type-founder![1]

I begin with the initial vowels:

𐨀, *a*. This symbol continues to occupy the place of the vowel *a* in all the new names lately added to our list, beginning with the Greek A, of which we have now no less than seven examples. The other short initials appear to be formed by modifications of the alif as in the Arabic, thus:

𐨁, 𐨂 *e*, is constantly employed for the E of Greek names.

𐨃 *u*, is found following it in the word Eucratides, as though put for the Greek Υ, but other evidence is wanting.

𐨄 [with the head-line reversed], *i*? though seldom met with on the coins, is common in the inscriptions, and by analogy may be set down as *i*.

𐨅 *á* [the Numismatic *an*, plate xi.], is employed in words beginning with AN.

The medials seem to be formed in all cases by a peculiar system of

[1] [It will be seen that under the combined poverty and imperfection of the only Bactrian type available in Europe, I have had much difficulty in doing justice to Prinsep's latest revision of this alphabet. As my author's own forms were often faulty and defective, it was of course useless to reproduce the deficient letters, or to do more than indicate as nearly as possible, though necessarily in somewhat of a patchwork manner, the essential position in which he left the study of Arian palæography.]

diacritical marks; of these the *i* is the best determined, being found applied to almost all the consonants in the form of a small stroke crossing the letter. The *á* is uncertain; it may be a prolongation below in the *r*,—a foot stroke or *mátra*. The *e*, I judge from the Manikyála inscription, to be a detached stroke behind and above; in a few cases only joined. The *u* may be the loop so often seen at the foot of the written letters. I feel it to be a little premature thus to assign sounds without any positive authority; but it was from a similar assumption of the value of its vowel marks that I was led to the discovery of the Indian pillar alphabet.

With regard to the consonants, I ought, perhaps, to follow the order of the Hebrew alphabet; but, as the language to be expressed is allied to the Sanskrit, it may be more convenient to analyze them in the order of the latter.

, *ka*. This letter on further scrutiny I find invariably to represent K; and its place is never taken on the coins by , as I formerly supposed. It occurs also with the vowel affix *i*, as *ki*; also, but seldom, with the *u*, as *ku*; and with the subjoined *r*, as *kra*. In the compounds, *kla*, *kli*, a form is adopted more like the Hebrew *q* (quere ). There are two or three examples in support of it.

, *kh*, is limited as such to the name of Antimachou; but I find it also representing the *g* in Abagasou. In the written tablets we have various forms seemingly identical with it; yet one of these, with the vowel *i*, is used in some places for *dhi* (intended for the inflected ?). There is no small affinity between them and , , the *kh* of the old Sanskrit written invertedly.

[1st, see second form of Numismatic ; 2nd, the same inflected with *r*; 3rd, the compound represented by the eleventh letter in the inscription from the brass cylinder, pl. vi., vol. i.] I place these forms here because they occur several times in the tablets, and they bear some resemblance to the *g* of the Pehlvi.

Of the Sanskrit palatials neither the Greek nor the Chaldaic alphabets contain any proper examples—the *ch* and *j* are modified to *s* and *ts*—which letters we must expect to find substituted for the Sanskrit class **च छ ज झ**.

[No. 1, a *v* reversed; 2, a *d* reversed. See Numismatic *chh*, pl. xv.] The first of these forms is found at the close of a series of words terminating each in the same vowel inflection, , *e*; which makes me suppose it to be the Sanskrit conjunction *cha*, uniting a string of epithets in the locative case. As yet I have no stronger argument for its adoption.

, or , *ja* (*tsa*?). The form of the Chaldaic *ts* , agrees well with

the first; indeed, in many coins of Azes, the Bactrian form is identical with the Chaldaic. I find that in every case this letter may be best represented by the Sanskrit ज *j*, and, indeed, in the early coins of Apollodotus, etc., its duplicated form [the fourth letter in Maharája, pl. xii.] seems to be copied from the ancient Sanskrit E, reversed in conformity with the direction of the writing. The only inflection I have met with of this letter is *ju*.

I can make no discrimination between cerebrals and dentals; because the Greek names translated have of course no such distinctions, but from the variety of symbols to which the force of *d* and *t* must be ascribed, I incline to think the alphabet is provided with a full complement, though it is in the first place indeed almost a matter of option which letter to call *d*, *t*, *r*, or *n*, they are all so much alike—thus for *t* we have ך, ב, ך, and ך, and with the vowel *i*, ו, ⸗, etc.

As the equivalent of *d* again we have the same ב, ך, ך, and also three other forms [1st, the second of the fifth Tradata, pl. xii; 2nd, the third of Menander; 3rd, the penultimate in No. 32, pl. xii.]: and for *dhi*, [*dhri* and *dhi*] the formerly evidently ו with ו subjoined; the latter quasi *tti* or *ddi*: sometimes it is nearer ⸗ *ri*.

I do not attribute this ambiguity to the letters themselves so much as to the carelessness and ignorance of the writers, who might pronounce the foreign name Apollodotus, indifferently Apalátada, Apaladata, and even Apalanata. Being obliged to make a choice, I assume as in my former paper—

ך, ך, for *ta*, whence the various inflections.

ζ, *tta*, *tha*, commonly used for *dh*, and its inflections.

ל ב, ⸗, for *da*, *nda*.

ξ, *na*. I do not perceive any indications of the other nasals, and indeed, they seem to be omitted when joined to another consonant: but I find something corresponding to the *anuswara* attached below the vowel *a*, and before consonants it seems represented by *m*.

ⲣ *pa*. The first of the labials is one of the best established letters. It has been discovered also inflected, and united with either *h* or *s* in ⲗ *pha* or *spa*: also with *li* in *pli*, and in other combinations which will be noticed as they are brought forward.

ⲫ, ⲫ, *pha* or *fa?* I have no stronger reasons than before for continuing this value to ⲫ:—it seems in some few cases to usurp the place of *v*; it is inflected also.

*Ba?* is still undetermined; in the doubtful name above quoted, ΑΒΑΓΑΣΟΥ, it seems to be replaced by ב or ⲗ—the aspirate is also unknown.

ᴗ *ma* ⸗. This letter admits of no doubt whatever; but in the

Menander form, 𐨨, I now recognize the inflection *me*, corresponding with the Greek name more closely. The second or what may be called the printed form of *m* has a considerable affinity in form with the old Sanskrit 𑀫 or 𑁅, whence it may be almost as readily derived as the Burmese form of the Pálí *m*.

𐨪 *ya*. This letter is unchanged: it invariably replaces ʒ and *y*, and sometimes *j* where the latter would be expressed by the Sanskrit ज or ज़. It may perchance have been modified from the letter, for in some examples it is turned up on the sides thus, 𐨪; the inflected form *yi* is of common occurrence: *yu* less common.

𐨫, 𐨬, 𐨭, *ra*. It is necessary to preserve these three representatives of *r*; I incline to think that the prolongation below may be the *mátra* or the long *á* inflection, *rá*; for the first form is used in Ermaiou where there is no intervening vowel. It is only distinguishable from *d* by the foot-mark of the latter, which seems to be often omitted notwithstanding.

𐨮, *la*. Further acquaintance has taught me that this is the only representative of 𐨪 in Greek names: the instances wherein the *l* before appeared to be replaced by 𐨯 have been disproved by duplicate coins. The inflected form 𐨮𐨿, *li*, has numerous examples among our new acquisitions.

𐨰 *va*, and *vi*, rest on strong but not indisputable authority, as will be seen below.

𐨱, 𐨲 *ha*, has been removed from its former position as *l* on ample grounds; and the value now assigned has, I think, equally strong support—though as far as Greek names are concerned it rests solely on the initial syllable of Heliocles, *he*. There is, again, a similarity worthy of remark between 𐨱 inverted, and the old Sanskrit *ha*, ह, 𑀳.

𐨳, *sa*. To this letter I gave the sound of *o* on the former occasion, because I found it the general termination of nominatives masculine in Zend and Pálí—replacing the Sanskrit *visarga*, *ah* or *as*. Since then I have found the same letter (affected with the vowel *i*) in two Greek names as the equivalent of *si*, and I am too happy on other considerations to adopt this as its constant value; whether the dental *s* of the Sanskrit will best represent it remains to be seen, but the nearest approximation in form occurs in the Hebrew ס *s*: there are certainly two other characters [one like a *k*, or 𐨴], and 𐨵, having the force of *s* or *sh*. The former I should presume to be the Sanskrit *sha* श, from its likeness to the old form 𐨴. The latter, 𐨵, may be a variation of 𐨪, for which it is sometimes used, but rather by change of the Greek Z to Ξ, than as being the same letter, for elsewhere it takes the place of the Greek Σ as in AZIAIΣOY, while 𐨪 occurs for Z in the same word. In

form it seems to be the Chaldaic ת, or *th* soft. Several inflections of these letters have been observed.

It will be naturally expected that the alterations I have been compelled to adopt in the value of many of the above letters must produce considerable modifications in my former interpretation of the Bactrian legends. Indeed, when I look back at my attempt of 1835, I must confess that it was very unsatisfactory even to myself. I was misled by the Nakshi-rustam trilingual inscription, wherein the title of king of kings has been uniformly read as *malakán malaká*, though I balanced between this and the term *maharáo*, having found PAO on the Indo-Scythic series. But, once perceiving that the final letter might be rendered as *sa*, which is the regular Pálí termination of the genitive case, I threw off the fetters of an interpretation through the Semitic languages, and at once found an easy solution of all the names and the epithets through the pliant, the wonder-working Pálí, which seems to have held an universal sway during the prevalence of the Buddhist faith in India.

The best test of the superiority of a Pálí interpretation will be found in its application to the several royal titles of the Greek kings, which were previously quite unintelligible. The first of these is simply ΒΑΣΙΛΕΩΣ, which is constantly rendered by ᴗ⌊ᴗᴦᴦ *maharájasa*, the Pálí form of महाराजस्य. It is true that there is some doubt whether the long vowel *á* is here applied to the *h* and *r*; but we have long since been accustomed to the omission of this and even other vowels in the Satrap coins of Suráshtra. The word is often written ᴗ⌊.ᴗᴦᴦ, whence I have supposed the dot or dash below to stand for *á*.

The next title is ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ, which we find replaced by *mahárájasa rájarájasa*, a perfectly sound and proper expression according to the idiom of the Sanskrit. But in one class of coins, that of Azes, there are some very well preserved specimens, in which the second part of the title is ᴗᴦᴦᴦᴦ, which is evidently *rájátirájasa* (or *adhi*, for the letter has a turn at foot, and may be meant for *dhi*), the regular राजाधिराजस्य of the paramount sovereigns of India. The syllable *dhi* is often written ᴦ *ti*, ᴦ *ri*, or even *ṭi* or *gi* (?) but the vowel *i* shews what is meant.

To the title of king of kings is generally added on the Greek side the epithet ΜΕΓΑΛΟΥ, for which we have an addition in Bactrian of the word ᴗ⌊ᴗᴦᴦ *mahatasa*, one of the forms of the Pálí genitive of *mahán* (or *mahat*) great, which makes only *mahatah* महतः in Sanskrit. The full title then is thus found to be *mahárájasa rájadhirájasa mahatasa*, which is far preferable to the clumsy and unsatisfactory *malakao kakkao malako* of my former paper, now rectified by the rejection of ᴦ as *ka*.

The next title in the list is ΣΩΤΗΡΟΣ, for which we have rather a dubious word of four letters, either *dadatasa* or *nandatasa*, the former equivalent to ददतः the bestower of *dána*, a word comprehending protection as well as charity;—the latter to नन्दतः 'of the giver of pleasure.'

The epithet of next frequency is ΑΝΙΚΗΤΟΥ, the unconquered, which is translated by *apavihatasa* (Sans. अपविहतस्य), the unbeaten or invincible. It is this word principally which leads me to make 𐨀 *va*, and to distinguish it from 𐨌 *ti* and 𐨍 *li*, with the latter of which I before confounded it.

Next in order comes the somewhat similar expression ΝΙΚΗΦΟΡΟΥ; but the correct definition of this epithet is preserved in *jayadharasa*, the bearer of victory. In one instance the *dh* is written separately 𐨔𐨗𐨆𐨗𐨆𐨗; in others (like the *dh* of *adhi*) it is *jayadarasa*, but there can be little doubt of the sense; and this word is a strong confirmation of the value of the letter 𐨔, or 𐨕 *ja*.

There is a second epithet of nearly the same signification which is common enough on the Seleucidan coins, but comparatively rare on those of Bactria, ΝΙΚΑΤΟΡΟΣ. This epithet was found on the unique coin of Amyntas, of which Col. Stacy was unfortunately robbed, and on one or two others. In the Bactrian translation the same word is used in every case as for ΝΙΚΗΦΟΡΟΥ, namely, *jayadharasa*, the possessor of victory, or the victorious.

There remains but one epithet to be accounted for (for ΦΙΛΟΠΑΤΟΡΟΣ of the Apollodotus unique coin does not seem to be translated):—it occurs on the coins of Heliocles, Spalurmes, and Archelies; I mean ΔΙΚΑΙΟΥ 'the just'—a rare epithet in any but the Arsacidan line of kings. This is everywhere rendered by *dhamikasa* (Sans. धर्मिकस्य) the exact expression required, and one constantly applied to Indian kings.

I am wrong in saying that the epithets are here exhausted, for on the unique coin of Agathocleia in Dr. Swiney's possession there is a singular epithet ΘΕΟΤΡΟΠΟΥ, 'heavenly dispositioned,' yet unaccounted for: of these, the two or three first letters are lost, and the last two 𐨗𐨆 *tasa* may terminate *devamatasa* or some such simple translation. It is a curious fact that the name of the queen does not appear to be feminine in the Bactrian legend; and the title *mahárájasa* is also in the masculine.

There is another expression on a coin of Spalurmes, viz., 'king's brother,' ΣΠΑΛΥΜΟΣ ΔΙΚΑΙΟΥ ΑΔΕΛΦΟΥ ΤΟΥ ΒΑΣΙΛΕΩΣ, the Bactrian translation of which at first seemed inexplicable; but, by means of

another coin, I think I have solved the enigma, as will be presently explained.

Another expression for the 'great king of kings,' is met with in one example only, as far as my information goes, namely, in the rude square coin of Spalirises, of which four specimens have passed through my hands: here the expression runs *maharajasa mahatakasa* (quasi महाताकस्य); but no great stress can be laid on such rude specimens.

Having thus satisfactorily disposed of the regal titles, we may place once more under review the whole of the Greek names with their Bactrian transcripts collated from a multitude of specimens.

| GREEK NAME. | BACTRIAN IN ROMAN CHARACTER. |
|---|---|
| AZOT ..... | *Ayasa* (pronounced *Ajasa*) |
| AZIAIΣOT ..... | *Ayilishasa.* |
| AΠOΛΛOΔOTOT ..... | *Apaladatasa.* |
| AΓAΘOKΛEΩΣ.....(found only in the old Sanskrit) | |
| AΓAΘOKΛEIAΣ ..... | *Fakasaqlitasa* (or *yasa*). |
| ANTIMAXOT..... | *Anti-makhasa.* |
| ANTIAΛKIΔOT..... ..... | *Anti-alikidasa.* |
| AMYNTOT..... | *Amitasa.* |
| APXEΛIOT..... | (unique, Bactrian name erased). |
| ABAΓAΣOT ..... | *Abakhashasa.* |
| EYKPATIΔOT ..... | *Eukratidasa.* |
| EPMAIOT ..... | *Ermayasa.* |
| HΛIOKΛEΩΣ..... | *Helayaqlayasa.* |
| ΔIOMHΔOT ..... | *Tayamidasa.* |
| ΛYΣIOT..... | *Lisiasa* (or *Lisikasa*). |
| MAYOT ..... | *Ma-asa* (or *mâyusa*). |
| MENANΔPOT ..... | *Medanasa* (or *Menanasa*). |
| ΦIΛOΞENOT ..... | *Pilasinasa* (or *Plijasinasa.* |

Then follow a class of coins in which the names are either quite different on either side, or the Greek is intended for a transcript or translation of the native appellation.

| | |
|---|---|
| ONΩNOT (of Vonones)..... | *Spalahárasa* (or *Balahárasa ?*) |
| ΣΠAΛYPIOT (or ΣHΛAYMOΣ ..... | *Spalafarmasa.* |
| ΣΠAΛIPIΣOT..... | *Spalirishasa.* |

Then the group of the Ferres, or Phraates dynasty, if we may so call it, of which some new specimens will be introduced presently—

| | |
|---|---|
| YNΔOΦEPPOT ..... | *Farahetasa nandatasa.* |
| ΓONΔOΦAPOT ..... | *Farahetasa gandadharasa.* |
| HPONAΣΦEPPOT ..... .... | *Fharateklisanadharasa ?* |

but it may be doubted whether all these are not in reality the same name, *Farahetasa*, coupled with the title corresponding to ΣΩTHPOΣ, written in a loose manner.

On the reverse of the coins of the second Hermæus (or perhaps the

# Bactrian Coins.

after J. Prinsep.

W. West Lith.

Published by Stephen Austin, Hertford.

third), having a Hercules for reverse, commences another series of native names, forming what we have designated the Kadphises or Kadaphes group. After the change from EPMAIOY on the obverse, to KAΔΦIZOY, we have still precisely the same reverse as before, and it is preserved through a numerous series;—the title of mahárája is not to be found, nor is it easy to see where to commence either the Greek reading K□Σ□VA□ KAΔΦIZ□V X□Pavov, or the Bactrian, which may be transcribed *dhama . . rata Kujulakasa sabashakha (?) Kadaphasa* :—in this reading, if we can make out nothing else, there are at the least two names, *Kosoula* (also written *Kozulo* and *Kozola*), and *Kadphises* (also written *Kadaphse* and *Kadphises*), accounted for. The distinctions on the small coin of KOPANOY ZAΘOY KAΔΦEC I am unable as yet to make out for want of further samples.

Connected with the same family we then come to the long inscription on the Mokadphises coins, which may be read by comparison of a great many examples :—

*Mahárajasa rajadhirajasa sabatracha ihacha mahiharasa dhi makadphiṣasa nandata.*

'Of the great sovereign, the king of kings, both here and everywhere seizing the earth, etc., Mokadphises, the saviour?'

I do not insist upon any of these epithets, *sabatra mahidharasa*, for in fact they vary in every specimen. The *dhi* also looks in many coins more like *dha*, quasi *dhama Kadphisasa*. On some the reading is rather *sabalasa saviratasa mahichhitasa* महीचित: sovereign?). On some gold coins, again, the name more resembles *vavahima Kadphisasa*, agreeing with the Greek OOHMO KAΔΦICHC.

It remains only to apply my theory of the Bactrian alphabet to the inscriptions on the cylinders and stone slabs extracted from the topes at Manikyála, etc., but this is a task of much more serious difficulty, and one not to be done off-hand, as all the rest has been! I must, therefore, postpone the attempt until I am better prepared with my lesson; and, meantime, I will proceed to describe briefly the contents of

## PLATE XLIII.

Fig. 1 is a small silver Euthydemus in Capt. Burnes' collection: it resembles exactly the medallions already published of the same prince. Weight, 62 grs. See pl. xxv., vol. iv., fig. 1, 'Jour. As. Soc. Beng.'

Fig. 2 is a hemidrachma of Demetrius also belonging to Captain Burnes. See one figured from General Ventura's collection, pl. xiii., fig. 2.

Fig. 3, a silver coin of Antialcidas, presented to me by General Ventura. Execution very good. Weight 10½ grains.

OBVERSE:—BAΣIΛEΩΣ NIKHΦOPOY ANTIAAKIΔOY. Head of the king with a flat helmet shaped like a cocked hat:—chlamys on the shoulders, and diadem seen under the hat.

REVERSE:—Bactrian legend, *Mahárajasa jayadharasa Antialikidasa.* Jupiter

seated holding a small figure of victory:—at his feet to the right, the forepart of a small elephant with trunk elevated. Monogram on the left composed of P and ⊲[1].

Fig. 4, a similar drachma of Lysias, belonging to General Ventura: unique.

OBVERSE:—ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ ΛΥΣΙΟΥ. Head of the king, with the Demetrius helmet, shaped like an elephant's head.

REVERSE:—Bactrian legend, *Mahárajasa apavihatasa Lisiasa.* (The copper square pieces have *Lisikasa*). Hercules naked standing, with club and lionskin, as on the coins of Demetrius.

Figs. 5, 6. Two varieties of Menander, not yet depicted in the journal, given to me by General Ventura, who has many of a similar nature. In one the prince wears a handsome helmet, in the other he has the simple diadem. The reverse of both agrees with the one engraved in pl. xiv., fig. 1, except that Minerva looks in the contrary direction.

HELIOCLES, KING OF BACTRIA.

Fig. 7. The first coin of Heliocles which I have yet seen in India. It belongs to General Ventura. A square copper or bronze piece in excellent preservation.

OBVERSE:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΗΛΙΟΚΛΕΟΥΣ. Diadem'd head of the 'just king, Heliocles,' somewhat similar in features to Eucratides.

REVERSE: Bactrian legend, *Mahárajasa dhamikasa Heliyaklayasa*:[2] an elephant equipped with howdah and trappings walking to the right; monogram Σ.

Fig. 8. A less perfect coin of the same king presented by the General to myself. In lieu of the head of Heliocles, the obverse bears an elephant, naked, walking to the left, Greek legend as above. The reverse is irrecoverably lost.

It is, perhaps, unnecessary here to retract my former doubts of the existence of a Heliocles in the Bactrian dynasty, since they have long been removed by the account of the silver medals in France. We have as yet seen none but these two copper specimens in India, but the probability is that both silver and copper might be found in Bactria proper, to the north of the Hindu Kush or Imaus.

An opinion has been started by Mionnet, in opposition to many European numismatists, that Heliocles was no other than Eucratides the second, the parricide. The surname of ΔΙΚΑΙΟΣ, so unsuitable to such a character, he supposes given through fear or adulation, which I agree with M. R. Rochette in thinking too great an anomaly to be allowable: but without seeking to account for this staggering circumstance, we can now help M. Mionnet to a very powerful argument in his favour from the unique coin of Dr. Lord described in a former part of this paper, which proves that Eucratides' father was a Heliocles; and we know that it was common to call an eldest son by his grand-

[1] N.B. The etching of this coin is a total failure: the plate was laid by for several months and the acid would then barely touch it. In retracing it, the native engraver has quite wandered from my original, and I perceive it too late for alteration on more than half the edition of the plate.

[2] The ante-penultimate letter might be better read *Sra*, or *Sri*: which would give a Sanskrit version of the name,—*héliyasriyasya*, 'having a sun-like prosperity.'

father's name, as is, indeed, universally the custom to the present day both in Eastern and Western countries.

Fig. 9. I have introduced this duplicate of the single mutilated coin depicted in fig. 8, pl. XV., among the then doubtful group, because General Ventura's present specimen exhibits the name in the Bactrian, ϷΛϤ *ayasa*, and thus proves it to belong to the abundant series of AZES' coins.

Fig. 10 is a square copper coin of Lysias kindly added to my cabinet by General Ventura.

It is in better preservation than any before published.

OBVERSE:—ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ ΛΥΣΙΟΥ. Head of Lysias, with diadem. Mionnet says of a similar coin, 'représenté en Hercule, la massue sur l'epaule gauche'—but I do not perceive these characteristics very distinctly.

REVERSE:—Bactrian legend, *Mahárajasa apavihatasa lisikasa*, 'of the unconquered king *Lisika*.'

I perceive that both Mionnet and M. Raoul Rochette give to Lysias the square coins of Spalyries or Spalurmes; though there is no resemblance whatever between them. M. Raoul Rochette writes in the 'Journal des Savants,' Mars, 1836, p. 136:—

'Cette autre médaille de Lysias diffère sous tous les rapports de celles que nous possédions déjà du même prince: elle est restée inconnue,[1] à tous les savants et voyageurs Anglais qui, depuis plusieurs années se sont appliqués avec un zèle si louable à recueillir ces précieux monuments de la civilization Grecque enfouis dans le sol de l'Inde: et l'exemplaire que nous devons à M. le général Allard, et que je publie, est encore unique. La fabrique, qui ressemble à celle de la médaille du roi anonyme, que j'ai fait connaître,[2] accuse sensiblement une époque de décadence, d'accord avec la forme carrée du ⊏ et de l' □ qui commencent à paraître sur la monnaie des Arsacides, à partir de Phraate III. à une époque qui doit s'éloigner bien peu de l' âge de notre Lysias. On pourrait voir un autre rapport entre cette monnaie Bactrienne et les médailles du même prince Arsacide, dans le titre de juste, ΔΙΚΑΙΟΥ, qui se lit habituellement sur les médailles de Phraate III. . . . . mais ce qui constitue ici la particularité la plus remarquable et la plus neuve, c'est la qualification d' Adelphe, ΑΔΕΛΦΟΥ, affectée par Lysias, &c."

When the mistake of attributing this coin to the wrong person is corrected, it is curious how perfectly the observations of the learned antiquarian of Paris confirm the conjecture to which I have been led by the deciphering of the Bactrian legend:—the coin is that of the 'son of a king Spalahara or Balahara;' in bearing the effigy of Hercules it agrees with the corrupted coins of Hermæus II. and others

[1] The drawing of the very coin described by M. R. R. was published by myself in June, 1835, but I did not deem the name legible, nor has it proved so at Paris, by their making Lysiou out of Spalurmou. I stated my reason for not publishing earlier to be, that I might not forestal the 'As. Soc. of Paris' in describing General Ventura's splendid collection.

[2] It is not obvious in what this great resemblance consists;—one coin is square, the other round:—one has a Greek legend only; the other a bilingual one—the equestrian figure is the obverse in one; the reverse in the other. The anonymous coin was first published in the 'Asiatic Researches' in 1831, and in the Journal for 1833 and 1834.

of the Pherres or Phrahetasa (Phraates?) type, which appear to belong to one family. M. R. R. agrees with our discoverer Masson in locating them in an Indo-Greek dynasty at Nysa, or near Jelálábád, where their coins are found in the greatest abundance.

I have introduced an engraving of a very perfect specimen of this coin given to me by Mr. Trevelyan, who got it from Mohan Lál, as fig. 3 of pl. xlii.

It may be remembered that the name of Vonones is not found on the Bactrian side of his coins, but a totally different word, [illegible] *Balaharasa* as I read it, or perhaps *Baláharasa* (वलाहरस्य), the patron of champions, a term nearly equivalent to 'Satrap.' Now on all the coins of Spalyries (or Spalurmes) hitherto found, the initial letter has been unfortunately cut off; but the three next are *lahára*, the same as above, wanting only the final genitive inflection: the next letters may be read *putasa*, for (पुत्रस्य) 'of the son.' Putting the whole together we have ([illegible] *Ba*) *láharaputasa dhamikasa Balafaramasa*, 'of Balafarama (either for Balaparama, or बसवर्म, whose strength is his armour) the just, the son of Baláhara.' Therefore, as he was brother of the cotemporary of Vonones, 'the then king' must also have been a son of the same person: and we should expect to find another coin of a somewhat similar type struck by him. These conditions are satisfactorily combined in the rude square coin of Spalirises, depicted in pl. xv. and pl. xxviii., fig. 7. He has the same flowing mantle from the shoulders, the sceptre of royalty, and his native name appears to be Balirishasa: thus the father's native name is Balahára; the eldest son's Balirisha, and the second son's Balavarma, and the copper money of the whole triad is distinguished for its exceeding rudeness no less than its conformability of type! The silver money of Spalurmes and Spalirises has not yet been found, or we might probably find that it maintained the name of Vonones, the Parthian king, or his successor, on the obverse.

The style of these three names commencing with Bala,—and the title in particular of the first, Balahára,—call to mind the Balhára dynasty of north-western India, of which the epoch cannot be said to be yet well defined. One of the earliest foreign authorities, the historian Masoudi, who wrote in 947 A.D., says:—'The dynasty of Phoor, who was overcome by Alexander, (had) lasted 140 years: then came that of Dabschelim, which lasted 120 years: that of Yalith was next, and lasted 80 years, some say 130. The next dynasty was that of Couros: it lasted 120 years. Then the Indians divided and formed several kingdoms; there was a king in the country of Sind; one at Kanauj; another in Kashmir; and a fourth in the city of Mankir

(Minnagara?) called also the great Houza, and the prince who reigned there had the title of Balhára.'[1]

120 + 80 + 120 = 320 years, estimated from Alexander's time, brings us to B.C. 3, or, allowing a few more years to Porus, say 10 or 20 A.D. Now, the reign of Vonones I. as king of Parthia is dated by Vaillant from A.D. 6 to A.D. 20, so that the accordance of time is here perfect, and we need seek no other explanation of the paramount Persian sovereign's name and effigy on one side, while the other modestly bore that of his tributary, because we have witnessed the same in the Satrap coins of Suráshtra. The native kings were apparently allowed to have the copper coin to themselves. The religion here, however, is polytheistic, the effigy that of Hercules or Baladeva.

Without insisting upon their being the same person, I cannot help mentioning that the name of Balarishi is found as one of four brothers by different mothers, who cut a conspicuous figure in Indian fable. Balarishi, Vikramarka, Bali, and Bhartrihari; the second of these is the celebrated Vikramáditya, whose reign falls 56 years before Christ, and he was the son of one Gandha-rupa, or, as the fable has it, of a *gandharva*, in the mortal disguise of an ass. Wilford interprets the tale by making Vikramáditya the son of Bahram Gor of Persia by an Indian princess, and, to account for the anachronism of 400 years, is forced to imagine there were several kings of the same name,—which would be likely enough if he admitted (as seems certain from our coins) that Vikramáditya is a mere title. We shall presently allude again to this circumstance.

Fig. 11. From General Ventura's collection. A more perfect specimen of a hitherto illegible coin. It is now seen to belong to Mayes.

OBVERSE:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΜΑΥΟΥ. Front figure of the king seated on a chair or throne, a shawl (?) on his shoulders, a club or knotted sceptre in his right hand like that given to Mokadphises.

REVERSE:—Much worn and indistinct, a female holding some object like a scarf with both hands, and having a flowing robe behind, like that of the Vonones group. Bactrian legend, *rájadhirajasa mahatasa maasa*, and on the field ψλ used numerically (?)

The discovery of this rare specimen, only the third known of the prince whose name it bears,[2] will be highly gratifying to the numismatists of Paris. It will, in the first place, remove the doubt entertained by M. Raoul Rochette himself whether the un-Greek appellation Mayes might not be used for *Mao*, 'the moon,' as a divinity and not as a king; or whether, united to the title ΒΑΣΙΛΕΥΣ, the compound may

[1] Wilford's Essay, 'Asiatic Researches,' ix., 181.

[2] I have just received another Mayes of different type from Capt. Burnes too late for insertion here.—J.P.

not be equivalent to the name of Apollodotus: 'ce n'est là, du reste, qu'une conjecture que je soumets avec beaucoup de défiance aux lumières de nos philologues indianistes, desquels seuls il est permis d'espérer la solution de ce curieux problême.'

The problem is now solved so far that we find him an earthly sovereign with similar titles to those of Azes,—and that he is not Apollodotus! The native name, composed of three letters, I should have formerly read MAO, but on the new, and I think correct, system now adopted, it must be read *Má-asa* or *Mayusa*, as near an approach to the Greek, or by the Greek to it, as the relative alphabets would allow. Of the name itself, I am inclined to identify it neither with *Maia*, the mother of Mercury (though the caduceus favors this idea, and the Indian *Máyá* is also the mother of Buddha), nor with *Mao*, as lunus,—though Chandra is a common name enough,—but rather with Máyu (मायुराज:), the son of Kuvera, the god of riches (whose name also is frequently adopted by princes),[1] and it may have been borne by a contemporary or successor of Apollodotus, who swayed the sceptre but a short period in some part of the Panjáb, if it is necessary to suppose them of the same age.

PHILOXENES.

Fig. 12. A square copper coin in most respects agreeing with the former one, also of General Ventura's collection, but having apparently a difference in the orthography of the Bactrian name. On comparing the drawing of the silver Philoxenes in the 'Journal des Savans,' with the rapid sketch I had taken of the same coin while in Calcutta, I perceive that I read the name and title wrong; which is my reason for inserting this better preserved coin:—the legend is clearly *maharajasa apavihatasa plijasinasa* (or *Philásinasa*). On the silver coin the epithet is *apavihasasa* (quasi अपविहसस्य)—not to be laughed at! but I think the *s* must be a blunder.

M. Raoul Rochette judges from the military aspect of Philoxenes that he was a satrap placed with a regal title on the north frontier of the Bactrian kingdom when threatened by the Scythians; but the circumstance of none of his coins having been found by Masson in the upper field, while several have come to light in the Panjáb, would tend to contradict this hypothesis, as much as the *Ceres Carpophore*, or abundance personified, and humped bull of his copper coin. This learned critic does not allow that the brahmany bull has any reference to India, because it is seen on the Seleucidan coins; but in the only specimen I have in my cabinet of a Seleucus with a bull reverse, the animal is altogether of the European breed.

[1] See notes on the Allahábád inscription, Nov. 1837, p. 972—*Pálaka Ugrasena, devarákshtraka Kuvera.* As the Parthian kings were styled *devajanita*, this country of the devas may have been in the north, as was indeed the fabulous country of Kuvera, the god-king.

### Coins of the Azes Group.

A great deal remains to be done ere we shall be able to clear the history of this numerous and interesting series of coins. Every day new types and varieties spring up, generally of tinned copper or bronze.

Fig. 13 is a specimen in good relief lately sent down to me by General Allard; there was another in the collection sent home by General Court under care of M. Meifredy, of which I was favored with the sight of the drawing. On this the name on the Greek side was entire, and thence I am enabled to complete my description.

Obverse:—ΒΑCΙΛЄѠC ΒΑCΙΛЄѠΝ ΜЄΓΑΛΟV VΝΔΟΦЄΡΡΟV,—rája in a brahmanical dress, upper part of the body naked,—on the head a turban (?) with flowing fillets. The small figure of victory holding a chaplet over him forms the peculiarity of the device, of which there are yet but three samples. The monogram, which was before so unintelligible to us, I now recognise as a combination of two letters of the old Sanskrit alphabet, ȣ and ⊥, *m* and *n*.[1]

Reverse:—Whether the figure in a brahmanical costume, holding a trident in the right hand and a palm branch in the left, is Neptune, Siva, the river Indus, or the king, I am not sufficiently initiated in the art to determine. No two reverses seem to be exactly alike, though formed of the same materials; the legend on the present in Bactrian is

*Maharajasa rajarajasa nandatasa jayadharasa (?) Farhetasa.*

I do not pretend to be satisfied with the last epithet, nor with the name, which, however, I collate with M. Court's. I have conceived it possible, on a former occasion, that it referred to Phrahates, the predecessor of Vonones, or another of the same name: but there are too many uncertain letters in it to build theories safely upon. At any rate, the same name of five letters, here seen below the figure of Siva, is found on all the rude coins ascribed formerly to *Unad* (now corrected to) *Undo-pherres*, with exception of the penultimate letter, which is there always formed like an *f*. *Fara-eṭisa* (?), to which *nandatasa* (soteros) is invariably added—on M. Court's coin this epithet may be preferably read ᴾᴸᴸᴗ great!

On the area are two Bactrian letters, which might be profanely taken for 'six shillings' by an uninitiated handler!

Fig. 14. A variety of the same group, in General Ventura's recent collection. In this the horseman looks in the opposite direction, and the beginning of the name ΤΝΔΟΦερρο is visible. The monogram is composed of ȣ and ⊥,—ȣ̤ *mya*.

On the reverse, a well clad female holding still the trident (though it looks more like the cross) walks to the left—a Greek and a Bactrian monogram on either side, of complex form: legend as before, the name below.

Fig. 15. Another novelty from General Ventura's store, of which a duplicate has been sent to France by M. Court.

In all respects but the name the obverse corresponds with the foregoing. The

[1] I may here note that fig. 14, pl. xxxii., is also a coin of *Farheta*, with the letters ȣ̱ as a central symbol.

name in the two coins yet brought to light of this species is quite distinctly ΓCNΔCΦAPCY, which is either another member of the family or a corruption of the last.

The erect front-faced figure on the reverse is dressed in the Hindu dhoti, and extends his hands over a new symbol of gridiron fashion—in his left hand is the trident. This figure has been conventionally styled 'Siva,' when he appears with his bull on the Indo-Scythic coins. The native name is as before, *Farahetasa*, with the addition of *netadharasa*, 'the bearer of something not very intelligible, unless we make the first syllable ΛΨ *jaya*, 'victory.'

Referring to the observations in a preceding page about the brothers of Vikramáditya, I cannot forbear mentioning that in Gondophares we might almost recognize the father of Vikramáditya himself; for in the word Gondo-phares we have a signification not very remote from Gandha-rupa; φαρος being pallium, vestis exterior,—the compound may mean 'having a cloak made of the skin of the *gandha, gonda, gor*, or wild ass.' Whence may have originated the fable of the Parthian king doomed to assume the guise of an ass during the day.

These are speculations certainly much in the Wilford strain, but the curious coincidence in so many names is enough to lead even a matter of fact man aside from the justifiable deductions of sober reason.

Fig. 16, like the last, adds a new name to the Bactrian list. The coin, a thick copper piece in tolerable preservation, was sent down to me by General Allard a short time ago; it is as yet, I believe, unique.

OBVERSE:—(βασιλεως βασιλεων μεγαλου) ABAΓAΣ□V—'of the great king of kings, Abagases:' there may, perhaps, be another letter before the A. The king, known by the flowing fillets of his diadem, seems dressed in a petticoat, rája fashion—and he sits sideways on a richly caparisoned horse, looking to the right. Monogram ☿ as before, but with the Bactrian letter ʔ beneath it.

REVERSE:—The same royal personage (by the fillets) as if performing the functions of high priest. The dress is so precisely Indian, that I feel disappointed in not finding a regular Sanskrit name below; nor can I produce much of accordance between the Bactrian and Greek names—the letters are *abakhafasa*. On the field are various insulated alphabetic symbols,—Bactrian and Greek, and, under the latter, one which looks like a modern Nágari *n*, न, but is more probably a Bactrian letter.

The last figure in the plate (from General Ventura's store) is a duplicate of the Azes coin published as fig. 22 of pl. xvii. Between the two one important fact is established, namely, that at this period of the Azes dynasty the use of the Greek was entirely lost, while the native character was written with greater correctness in the same or rather the inverse ratio. The Greek legend is a mere jumble of letters, but the Bactrian reads continuously—

*Maharajasa mahatasa dhamikasa rájaṭirajasa Ayasa,*
'Of the great king, the mighty, the just, the king of kings, Azes.'

The figure of Abundance with her cornucopia has a compound symbol on the left, which might be read *Sri*, her Indian name; and on the right the two letters ʒ, ʕ, *kha* and *dha*, used numerically. (?)

The perfect Greek medals of Bactria proper, however beautiful as works of art, ought not to turn away our attention from these corrupted or 'barbarous' specimens which mark the decadence of Greek dominion and Greek skill. These are the most precious to the student of Indian history: through their native legend he may yet hope to throw light on the obscure age of Vikramáditya, and the Scythian successors of the Greeks on the north of India. Hitherto these classes of rude coins, though very numerous, have been much disregarded, and on that account I now invite attention to them, and promise to return to the task myself when I have fresh materials collected and arranged; my text being, 'those coins on which the native and Greek legends differ, or record different names.'

[Following out the plan I have adopted on previous occasions, of combining the substance of Prinsep's discoveries with a general outline of the present state of our knowledge of the various subjects embraced under each heading, I subjoin—

1st. A revised plate (xi.), and a cursory letter-press review of the Bactrian alphabet, as elucidated by the latest available evidence, and illustrated by a valuable comparative table of the transitions of the early Semitic Alphabets, furnished me by M. le Duc de Luynes (pls. xi.[a] xi.[b]).

2nd. A brief introductory notice of the Arian nomenclature, and the parallel transcription and translation of the Greek names and titles occurring on the coins.

3rd. An abstract of the leading theories for the epochal and serial distribution of the list of monarchs adopted severally by the authors who have specially devoted themselves to the study so effectively inaugurated by Prinsep.

4th, and finally, I annex an outline but numerically comprehensive catalogue of all the Bactrian coins I have had an opportunity of examining, together with references to the various publications wherein the more important pieces may chance to have been figured and described at large; further, to improve, as far as possible, the general series, I have added such examples as I felt myself justified in citing from Major

Cunningham's inedited plates;[1] and, to complete the typical details, I have compiled from the coins themselves a table of mint monograms (pls. xi.$^{c}$ xi.$^{d}$), which I trust will be found to afford a full and exact summary of these important records.

## I.—REVIEW OF THE BACTRIAN ALPHABET.

Whatever of modifications or discrepancies of form may be apparent in the Bactrian character, as opposed to the Semitic alphabets of the West of parallel date, there can be but one conclusion as to their joint derivation from a single parent stem. It would be absurd to suppose that the Phœnician and its cognate ramifications curtailed and yet complicated into the crude signs of their own system the more copious and advanced alphabetical series of the East. Indeed, there is internal evidence to the contrary, and the process of simplification of certain characters by the latter can be traced and detected in the mere mechanical configurations alone, and otherwise most of the changes and adaptations of the Arian scheme can be explained and accounted for by the double action of the needful increase in the total number of letters, and the effect of contact with the independently perfected alphabet of India proper.

The proofs of the common origin of the two styles of writing are to be found in the direction followed by both—from right to left,—in the leading idea of the construction of the majority of the characters of either, and, more definitively, in the approximation and close unity, in each series of the several forms of ב, ד [ה], ו, and ר.

[1] [It is perhaps necessary for me to explain more distinctly the reserve I feel called upon to exercise in this regard. Major Cunningham, some years ago, prepared and printed off a series of eighteen plates of Bactrian coins, designed for the ultimate illustration of his long contemplated work on 'The Successors of Alexander in the East.' These lithographs were most obligingly communicated to myself, and others interested in cognate studies in anticipation of the due order of publication. They contain facsimiles of many important coins that I should have been glad to have cited to improve the series now given, but as I trust the author will shortly be enabled to make public his elaborated memoir, I ordinarily abstain from anticipating the novelties he has delineated, even under the full acknowledgment appended on the rare occasions that I have quoted from this source.]

In regard to the date of the elaboration of the improved system, it would be vain to speculate with any pretension to accuracy; but it may be safe to say, while adverting to the internal fixity of the Semitic alphabet and the very remote period at which it can be shewn to have been in free use,[1] as well as to the material progress achieved up to that date, that the Bactrians must have separated and organized their system at an era considerably antecedent to B.C. 250,[2] which is the earliest epoch at which any example of their epigraphy can at present be quoted.

Symptoms of such an independent advance may be tested in the fact, that at the period in question, many of those letters of purely Semitic formation, which were retained comparatively intact as representatives of identical phonetic values, are found to exhibit a far more striking approximation towards the ultimately accepted forms of the modern alphabet than their correspondent characters of the Western system in use under the Seleucidæ.

[1] [For instance, its having formed the model of the Greek alphabet, which itself is admitted to have been employed in the 9th and 10th centuries B.C. Mure, 'Hist. Greek Lit.,' iii., pp. 403, 424, 430, 456. M. E. Renan considers that there is evidence authorizing the induction that the Hebrews wrote in the 'phénico-babylonien' alphabet at the time of the coming out of Egypt. 'Histoire Générale des Langues Sémitiques,' p. 108. Paris, 1855.]

[2] [I am not able to discover upon what precise authority M. Renan extends the spread of Semitism to Bactria at the period indicated in the subjoined extract, but I conclude he associates it in some way with the accession of 'la dynastie (d'origine arienne) qui éleva à un si haut degré, au viii^e^ siècle, la puissance de Ninive,' and the subsequent establishment of the kingdom of Babylon:—'Un fait beaucoup plus important que tous ceux qui viennent d'être cités, est la transmission qui se fit, vers le viii^e^ siècle avant notre ère, de l'alphabet sémitique à tous les peuples du monde ancien, par l'action combinée de la Phénicie et de Babylone. Semé sur toutes les côtes de la Méditerranée jusqu'en Espagne,[a] porté vers le Midi jusqu'au fond de l'Ethiopie, gagnant vers l'Orient jusqu'au Pendjab,[b] l'alphabet sémitique fut adopté spontanément par tous les peuples qui le connurent;' p. 195, 'Hist. Gen.']

[a] L'alphabet phénicien était devenu, sous diverses formes, l'alphabet commun de tous les peuples méditerranéens, avant d'être remplacé par l'alphabet grec et par l'alphabet latin, c'est-à-dire par deux transformations de lui-même. Dans le monument de Téos, déjà cité, l'expression *τὰ φοινικήϊα* (s. e. *γράμματα*) désigne le texte même de l'inscription.

[b] L'alphabet zend paraît se rattacher aux alphabets araméens. Quant au dévanâgari, son origine sémitique est restée très-douteuse, malgré les efforts de M. Lepsius pour l'établir.

Tracing more closely the internal constitution of this adaptive alphabet, we have to allow—(1) for the creation of nearly double the number of letters previously existing in any known Semitic series, incident to the linguistic demands of a more exact language; (2) for a hitherto-unheeded discrimination between consonants and vowels; and lastly, for that strange anomaly in Semitic writing, the introduction of the medial vowels in the body of, or attached to, the covering consonant, which was calculated so seriously to affect the normal form of the latter.

With these ample materials for comparisons and inductive definitions, it may be said that it should be easy to arrive at the truth; but it must be remembered that the very multitude and conflicting nature of the possible causes creates, in itself, a difficulty in selecting the ruling one. And as has already been remarked, we are not by any means in possession of the whole evidence in the case, but have to decide upon the facts presented to us by three literal series at a given point of their several histories, when each had already arrived at advanced maturity.

However, let the special instances be proven or not, thus much may be conceded on the general issue:—1st, That in the formation of the Bactrian alphabet the leading tendency was to follow Semitic tracings; 2nd, That the normal types of the parent stock were altered, adapted, and even devoted to new purposes, as occasion required, for the due exhibition of the more ample and exact speech they were now called on to embody; and 3rd, That the pre-existing and indigenously-matured Pálí alphabet of the South exercised more or less influence in the ultimate determination of many of the forms, more especially in regard to that extraneous element—the definition of the vocalic sounds.

With this limited preface I introduce the detailed examination of such letters of the entire series as seem to furnish data in support of the results above indicated, otherwise avoiding all

notice of those characters which neither illustrate the general derivative question, nor present any difficulties in regard to their own forms and values.[1]

It will be seen that I follow the order of the Lát alphabet, as arranged by Prinsep in his early engravings.

1. Regarding the value of the letter *k* in its leading lapidary form, or its numismatic modifications, there has been from the first but little question. Some apparent anomalies, however, present themselves in the way of a ready determination of the prototype from whence the Arian letter derived its outline. The normal configuration of the Semitic כ, *Caph*, seems to have been devoted, in the Bactrian system, to the representation of a new articulation;[2] and the prevailing style of the Phœnician ף, *Koph*, was superseded in the Eastern alphabet by the appropriation of an almost identical character as the exponent of *s*. And yet, amid the enigmas of Semitic palæography, it is curious to mark the community of design apparent between the Bactrian 𐨟 of extreme Eastern maturation and one of the Aramæan varieties of the ף preserved on the monuments of Egypt.[3]

2. The *kh* of the Bactrian system will be seen to have gone through a succession of forms, whether under its numismatic or lapidary progressional course: this is possibly owing to its infrequent use, whereby it retained a less determinate position in the general alphabet. It is found on the coins of—(1) Antimachus; (2) Archebius; and (3) Kozola

[1] [It is needful that I should specify more precisely the nature of the materials whereby I propose to justify my inferences:—1st, In regard to the lapidary characters. The Kapurdigiri inscription may be examined in Mr. Norris's most scrupulous mechanical transcript, copied from an inked-cloth impression taken from the rock itself, and published in the 'Jour. Roy. As. Soc.,' vol. xii., p. 153; as an additional verification of the facsimile, I have been able to consult the original calico transfer, in some cases available in duplicate, as well as Masson's own eye-transcript, executed with such obvious care and accuracy on the spot; and, finally, advantage has been taken, in the few possible instances, of the seemingly correct outlines afforded by an indifferent Calcutta lithograph, designed by Mr. J. W. Laidlay, and purporting to have been drawn from a facsimile by Captain A. Cunningham, copied *in situ*.—The Manikyâla stone inscription is engraved in pl. ix. of this work, and the entire transcript has been compared and tested anew, from the original—now rectified as to its position on the walls of the Bibliothèque Imperiale—since my remarks at p. 125, vol. i., were printed off. The Wardak inscription, which may be classed with the monumental rather than with the numismatic section of palæography, is reproduced in pl. x., and the urn itself is before me for reference. The numismatic characters are necessarily gathered from diverse sources, which it would be tedious to expose at large. It may be sufficient to say that the apparent age of the coins has ruled the order of the several exemplars inserted in the plate of alphabets.]

[2] [*J* or *jh*, *infrâ*.]

[3] [See Gesenius, Carpentras Inscription, tab. 4; and type table of Semitic Alphabets *infrâ*, series No. 3.]

Kadaphes, in each case in correspondence with the Greek X. Its Kapurdigiri outline is well ascertained, and equally so is its value, as the equivalent of the Páli ղ = ख. I have not been able to trace it very positively in the Manikyála writing, and the form I adopt from the Wardak urn is likewise only conjecturally inserted in virtue of outline similarities. I have also entered in the plate the most prominent of the numismatic varieties, whose originals seem often to exemplify the mere crudities of imperfect engraving; but the letter, as it appears on one of Archebius' coins,[1] presents a striking peculiarity in the supplementation of a small hook, such as is used to denote the simple ի, which would almost seem to indicate an acknowledgment of the necessity of some further means of discriminating a character, in many instances liable to be taken for a *t* or an *r*. The precise sound of the ancient Semitic ח *Kheth* (*Hheth* or *Cheth*) is not very well determined; and if it were not for the seeming appropriation of the design of the legitimate Phœnico-Babylonian ח to the representation of the Arian *ch*, it might be possible to refer the origin of the Kapurdigiri guttural to a reduction of the superfluous lines of the Achæmenian H, to which stage the complicated figure of olden days had already been brought, and whose unchanged outline was finally accepted by the Greeks as their aspirate H.

3. ף = ʌ ग. This letter, regarding which some doubt at first existed, is now the received exponent of the sound indicated by the characters of the kindred alphabets set against it. The only difficulty connected with it consists in the question which necessarily arises as to what effect the horizontal foot-stroke, occasionally supplemented to its radical form, in common with those of the ղ *j* and ղ *t*, may chance to have upon its ordinary phonetic value. The Kapurdigiri Inscription, with a single doubtful exception,[2] leaves the original letter unadded to, and the Manikyála stone alike abstains from the augmentation. The Steatite urn (pl. vi.) seems to insert the stroke in the one case in the word भगवान and to omit it in the second version of the same title.[3] The Wardak Inscription, which, it may

[1] [ In the possession of Colonel Abbott.]

[2] [ The instance I refer to occurs in the 14th line in the word *gabagarasi*, corresponding with the Girnár Páli *gabhágáramhi*. The first *g* has the horizontal foot-stroke, which is clearly to be traced in the cloth impression: it is also entered in Mr. Norris's first copy from that facsimile, but it has been omitted in the lithograph. Masson's eye-copy gives it in full distinctness; and Major Cunningham's transcript fully acknowledges the existence of some such mark, though in the Calcutta lithograph the sign is transformed into an *anusvára*.]

[3] [ Prinsep, I see, has given it in both cases; but there is no trace of the line on the lid of the vase itself.]

be added, will be seen to contain a striking number of ग's in proportion to the rare occurrence of the letter in the cognate inscriptions, must be supposed to insert the sign or its substitute, in the form of a back stroke (easily confounded with the subjoined र *r*), in the majority of instances, while, in one case, the *g* is positively deficient in that or any other subjunctive mark.

For the present, therefore, I am disposed to conclude that this line constitutes a mere optional addition to the simple letter, possibly having its origin in a design more completely to distinguish the *g* from some of the literal compounds, with which it was liable to be confounded.

Regarding the origin of the character itself, I should be inclined to attribute its derivation to a semitically outlined and more cursive imitation of the Pálí ᴗ. The proper ʌ *g* of the Pálí series, which so nearly corresponded with the Phœnician ג *g*, will be seen to have been devoted to other purposes in the organization of the Bactrian alphabet;[1] hence a new form had to be found to represent the functions of the *g*, which it is easy to conceive may have been taken from a character of proximate sound in the independent series of the South.

4. 𐨖 = ᴗ घ. The sign for *gh* has been noticed and commented upon under its numismatic aspect, at p. 207, vol. i. It remains for me to confirm the true outline of the character from lapidary sources. The *gh* is not a letter of very frequent occurrence, so that the possible examples in the whole Kapurdigiri Inscription are limited to three. In tablet iv., line 8, the Arian letters that should correspond with the Girnár घ's in the words *Berighoso* and *Dhammaghoso*, are imperfect, both in the original cloth transfer and in Masson's eye-copy. Mr. Norris transcribed them therefore as simple *g*'s. However, the recurrence of the letter (tablet xiii., line 5), in its full form, and in due correspondence with the Pálí घ in the word *Upaghato*, leaves no doubt that the earliest lapidary outline is identical with that employed on coins.[2]

5. ङ *ng*. Major Cunningham claims, among his other discoveries in the Arian alphabet, to have detected the sign employed to represent this sound. I have had occasion to doubt the finality of this assignment (vol. i., p. 102), and for the present am constrained to leave the Arian column of equivalents of this letter unfilled.

6, 7. I pass by the various forms of च and छ, which are sufficiently assured in their early demonstration, as well as obvious enough

[1] [Y. No. 26.]

[2] [In addition to the proved example of the letter on the Behat coins, it is occasionally met with in monogrammatic combination on the Azes series. It also occurs in the last line of the Wardak writing (pl. x.), and in Captain Pearse's copper-slip inscription, 'Jour. As. Soc. Beng.,' vol. xxiv. (1855), pl. xv., p. 328.]

in their subordinate gradations, as exhibited in the plate, merely noting with reference to what has already been said on the derivation of the Bactrian *kh*, that the simple form of the Achæmenians and Artaxerxes Longimanus, or their joint prototype, may well be imagined to have furnished the model of the less stiffly-fashioned Bactrian *ch*.

8. ५ = ६ ज. I proceed to consider the various equivalents of the letter *j*. The Kapurdigiri and Manikyála outlines of the character closely accord with the simple numismatic type, while the dotted inscription on the Wardak vessel develops certain vaguely executed forms, which are scarcely consistent with one another, but which may generally be said to shew a considerable modification of the primary design.

The peculiarities in the numismatic character consist in some cases of an apparent duplication of the letter by the insertion of a second forward limb, and in the nearly uniform addition of the horizontal foot-line noticed as in occasional use in connexion with the normal form of *g*. And in these instances, also, I am almost forced into the conclusion that this extra line was not designed to have any effect upon the articulation of the consonant, as the same word, Rajadirajasa, is written alike, with or without the lower lines of the *j*'s (*ex. g.* Eukratides and Kadphises), though the earlier examples affect the former, while the later[1] return to the monumental outline. In regard to the association of the normal letter with any character of Semitic organization, I may note its near correspondence with some of the secondary forms of the Western ב, though it is clear, if any such identity is to be admitted, that the sign must be understood to have been appropriated to the expression of a foreign and very different sound in the Eastern system.

9. The definition of the Indian Pálí form of the *jh* was effected by Prinsep in March, 1838 ('Jour. As. Soc. Beng.,' vol. vii., p. 272; *suprá*, vol. ii., p. 36). As the Kapurdigiri correspondent passages, wherein this letter might have been expected to be met with, were defective in the one place (tablet vi., line 7), and differently cast in the other (tablet xiv., line 2), the Arian configuration of the character has hitherto remained undetermined. The authority for the present assignment rests therefore solely upon the legends on the coins of Zoilus, where the letter copied in the plate is found as the representative of the Greek z in the king's name. It will be remembered that the Devanágarí alphabet possesses no equivalent of the letter z;

[1] [ Some of the Azes' coins so far modify the shape of this adjunct as to give it a merely forward direction from the base of the letter, in seeming conformity with the parallel simplification noticed under the letter *g*, p. 149.]

and although modern practice, under the necessities of the adaptations of a foreign tongue, may often substitute the simple ज for the Arabic ز, this constitutes no obstacle to the free acceptance of the above identification. The Greek Ξ, it may be noted, is rendered in Arian by the letter ק = S (see Philoxenes). In this instance, as in those about to be noticed under Nos. 11 and 12, a difficulty arises as to whether the simple letter or its aspirate should be accepted as the more direct derivative from the parent alphabet. Gesenius' early forms of the Semitic כ *Caph*, as well as the leading column of the Duc de Luynes' alphabets, would favor the claims of the latter, while the Achæmenian and other proximate reproductions of the same letter approach more nearly to the linear rudiments of the former.

10. The Arian letter, answering to ञ, seems to have been primarily deduced from a duplication of the upper limb of the ordinary ʃ *n* to meet the requirements of due correspondence with the more exact and ample alphabet of the South. Its use in the Kapurdigiri Inscription is not exclusive in its accordance with the Pálí ꞃ. It is found in substitution of ·I = ण in *hiranna* (line 17), and (if the word is not misread) as the equivalent of ·ε *nj* (line 3); but where such strange liberties are seen to have been taken with the orthography in other parts of the writing, these departures from the intentional standard need not disturb the recognition of the leading value of the sign.

11, 12. The Arian cerebrals, *ṭ*, *ṭh*, in their relative configuration, seem to carry out the general idea of the Pálí alphabetical system, which associated the simple letter and its aspirate under more or less community of form, though in this instance the normal character would appear to have been retained for the representation of the aspirate, while the corresponding simple letter was constructed out of its elements by a slight modification in the arrangement of its original lines. The earliest Semitic ת, as its name implies,[1] consisted of a simple cross, and in such guise it clearly found its way into the Bactrian literal series. That it should be adapted to the exposition of the Eastern *ṭh*, rather than to that of the simple T, to which the Greeks devoted it, need cause no surprise, as it is clear that *th* (as in '*th*ink') was the primary and preferable equivalent of its sound, notwithstanding that the second and more dubiously aspirated *t*, ט *teth*, which co-existed in its own alphabet, was converted in the Hellenic system into Θ.

It is curious also to note, in the Kapurdigiri inscription, what may possibly chance to be a parallel simplification of the dental *t* out of the complicated lines of the *th* of the same order of consonants; except

[1] ['Cujus nomen (תָּו) *signum cruciforme* significare constat.' Gesenius, p. 47.]

that, if this derivation is to hold good, the supposition of the conversion of the Semitic ך into the former letter must fall through, and to the cerebral *ḍh* of the Bactrian scheme must be conceded the title of inheritance of the alphabetical outline of the Phœnician *Daleth*. Though, in this case, as the primary form of the original Semitic ט *teth*, like its derivative denomination, is indeterminate, and the Bactrian adaptation is equally uncertain in its point of departure, it will, perhaps, be preferable to adhere to the definition which supposes a construction of the simple ך = *t*, in unison with the parallel development of ב *b* and ך *r*, from the nearly identical rudiments of the simple letters of the earlier series, and consequently to regard the adaptive dental *th* as a linear improvement upon the tortuous form of the Western alphabets, and as based in one portion of its configuration at least, upon the modified representative of its own simple letter.

13. The *ḍ* is an alphabetical sign of limited use; but it is of consequence correctly to determine its normal form, with a view to the illustration of the history of the associate characters of approximate sound, and the determination of the progressive modifications of the letter itself. Its positive shape in its monumental expression is sufficiently defined (as given in the plate)[1] by the Kapurdigiri Inscription. It would seem to retain its original outline in the Manikyála writing, and is frequent amid the coin legends, though strange to say, in these instances it never occurs in its full and definite development as an isolated and uncombined letter, but only appears in its true shape in composition with the vowel *i*, to receive which its side limb has to be considerably prolonged: hence a question arises as to whether the radical configuration of the character was not subjected to a modified design in its ordinary expression as a simple letter; as such, it may possibly have furnished the model for the sign usually exhibited as ך; and it is clear that the resulting elongation of the upper line and the rounding off of the angular turning point might easily occur in the ordinary degradation of the character. And this suggestion brings me once more to face an acknowledged difficulty,—the intent and meaning of the horizontal foot-stroke attached. Hitherto I have had to deal with letters that derived little or no advantage from this supplementation; now a new light seems to break upon the subject, and it would almost appear that the foot-line in this case, like the Parthian semicircular dot of Naksh-i-Rustam, still extant in the diacritical mark of the Syriac ̣ *d*, was designed to discriminate the *d*, or at all events to distinguish it from some character

[1] [It is equal to  in tablet iv., line 12, and tablet vii., line 2; but it corresponds with  in tablet vii., line 3, in *ekadesam*.]

nearly allied in shape but differing in phonetic value. As a general rule (for there are few exclusively consistent ones in this series), the character used to express *d* is individualized by the cross-stroke, while the almost identically-formed *t's* and *r's* are preferentially left unmarked.[1] The value of the letter ב as *d*, whether doing duty as cerebral or dental, is proved by its alternation and interchange with the true dental ʃ in the antepenultimate in the name of Apollo*d*otus, and in the titles Tra*d*atasa and Ṙaja*d*iráj. So that, whether we accept it as a derivative from the old ч = ड,[2] or as an ordinary ר = त *t*, adapted to a modified articulation, its reciprocal value remains much the same.

14. The cerebral *ḍh* is not a letter in frequent requirement, and though the Arian equivalent is freely developed in the lengthened edict of Kapurdigiri, it need cause no surprise that it should not have been met with amid the brief legends on the coins, especially when it is seen how little discrimination was made between simple letters and aspirates, and what scant scruple was exercised by the die-engravers in the interchange of one *d* for another, or the more vague substitution of *t's*[3] in place of *d's*.

15. The cerebral *ṇ* well retains its original Kapurdigiri[4] identity in the later Manikyála lapidary writing, and on the engraved silver disc from the same locality. Among the modified letters of the Wardak inscription it is more difficult to determine its correct correspondent; for, if we are to follow the Manikyála inscription, the ordinary न has now become ʎ, which form duly appears on the brass vessel; but the ण is here so far changed as in some cases almost to look like a return to the model of the early ʃ = न of the Kapurdigiri legends.

16. The ר = ʎ त, is a letter which admits of but little question, from its first appearance on Asoka's monumental edict to its latest use upon coins. Its form is of importance under the comparative palæographical aspect, in that it assimilates so closely in its simple outline to the nearly homophonous Hebrew ד *d* of modern days, thus exhibiting the more speedy advance towards maturity of the Eastern system in contrast to that of the West, whose expression of the letter in 250 B.C. had in most instances diverged but little from the primitive sign.

[1] [*Ex. gr.* Eukrati*d*asa. Tra*d*atasa. Some of Apollodotus' coins mark the penultimate *t*, but in the better executed specimens the foot-stroke appears as an ओ. See note on that name in the Coin Catalogue.]

[2] [Among other inconveniencies of imperfect type, it will be seen that I am compelled to use the same sign for *j* and *ḍ*. The real difference between the two is properly discriminated in the plate.]

[3] [Coins of Azes, *et. seq.* 'Wardak,' i., p. 163.]

[4] [Precision in the use of this ण seems to have been as little regarded as in other cases already noticed. *Ex. gr.* ϙ = I usually. ϙ = ⊥, 4, 9.]

17. The letter *th*, in its early lapidary development, likewise admits of but little cavil; but it is doubtful whether its form is to be detected amid any of the inscriptions or coin-legends subsequent to its proved appearance on the Kapurdigiri rock. Its derivation, as well as that of its fellow *t*, has been already commented on in association with Nos. 11 and 12.

18. ʃ = ᵽ द. Regarding the letter *d* in its isolated aspect but little need be said; its absolute identity, in the earliest form of which we have knowledge, with the ordinary ʃ = न of the same alphabet, is singular, and often proves inconvenient. It appears to be but little changed in the process of time intervening between the endorsement of Asoka's edicts and the engraving of the Manikyála stone, though the associate न in the latter writing seems to have been considerably modified from the old type. On the coins, this *d* remains but little varied, either under the provincial or ordinary progressional influence. I have still to speak of the subjunction of the horizontal foot-stroke. If the theory be sound that this adjunct is attached to *d*'s and other special letters, and is never supplemented to the *n*'s,[1] then the second letter of the ordinary form of the name of Menander must be read as a *d*, which is certainly opposed to the probabilities of orthographical transliteration. If there were any authority for so doing, I should prefer to interpret the single compound as *nan*, assuming the foot-mark to be a mere simplification of the arrow-pointed anuswára of the Kapurdigiri system; but here, again, difficulties present themselves, as the sign can scarcely be uniformly accepted as the mark of *n*, and indeed as a suffix to the ו *a*'s and ק *s*'s, it affects another form. It would still be possible to infer that the discriminating sign of the *d* here supplemented to *n* might stand for the duplication of the succeeding *d*, in accord with Pálí requirements of orthographical expression; but I should be sorry to propose so hazardous a conjecture without more definite and positive evidence than I am yet in possession of. To dispose of the succeeding letter in Menander's name, under this, its proper heading, I may note that the character hitherto received as *n*, appears, from an examination of the best specimens of the multitudinous hemidrachmas of this sovereign, to be a combination of the equivalents of *drá*.

19. D = ʒ *dh*.[2] The definition of this letter is well ascertained,

[1] [Certainly this latter rule seems to hold good, with the single exception, if such it be, here noted. I have nowhere else succeeded in finding a pointed *n*.]

[2] [For a long time the Parthian *dh* was supposed to be represented by an outline similar to the above. The correct form is given in the plate, under ד. (See 'Jour. Roy. As. Soc.,' vol. x., p. 118; vol. xii., p. 264.]

and its outline undergoes but little change throughout the entire period represented by the various Arian writings antiquarians have as yet been able to assemble for scrutiny and comparison. I notice it in this place merely for the purpose of drawing attention to the curious coincidence of its form with that of the Achæmenian letter (522 to 456 B.C,), entered in the Phœnician series of the Duc de Luynes as the equivalent of the 𐤑 *Tsade*. This outline, it will be seen, departs notably from the ordinary run of the derivations from the old *Tsade*; and hence a question might arise as to whether the exceptional letter may not have been borrowed from the independently matured Bactrian series to represent a sound not very dissimilar to its own, but whose precise articulation did not exist in the Arian system.

20. 𐨗 = 𐨤 ন. The Kapurdigiri *n* of manifest Semitic derivation, which here had to represent the sound of *d* or *n* at will, seems to have preserved its, to us, normal form on the early coins of the Greek monarchs. Menander, at least, uses it in near parallelism with its counterpart *d*, and Philoxenes places its import as *n* beyond a shadow of a doubt, by inserting it as the penultimate letter of his own designation. The character, however, was soon doomed to modification, whether on account of the objection to one symbol having to represent two diverse sounds, we need not stop to inquire; but on the hemidrachmas of Dionysius the *n* has become little more than a perpendicular line, and stands in strong contrast to the initial *d*, which follows the old model. On the Kadphizes' coins (No. xxvi.) the *n* is formed almost like a Greek P of the obverse legends, and approximates more to the old design of the 𐨗 than to that of the simple ন. On Kozola Kadaphes' coins the *n* is figured as a perpendicular line with a single arrow-barb on its top like the letter I have transcribed as ন from the Manikyála stone and the Wardak urn; and, finally, on some of the Bactrian Satrap coins the letter appears with the full arrow-point, which may either indicate a modification of the form or value of the character, or may simply imply the addition of a short vowel to the original letter.

21. P.—The Arian *p* is a letter which presents no difficulty, either in its original ascertainment or its use in its onward course. But it claims special notice, in companionship with the *l* of the same series, on account of its departure from the standard Phœnician type, in the direction assumed by the indicative adjunct, which constitutes the very essence of the character. The Semitic 𐤓 is shaped like a Bactrian 𐨪 *a*: that is, the distinguishing curve from the leading down-stroke is turned to the left, while the letter 𐤃 of the former series produces the side curve to the right. In the Arian alphabet both these methods of formation are abandoned in favour of a directly opposite mode of

definition, which strikingly identifies the resulting characters with the corresponding letters of the Pálí. These coincidences may, of course, be purely fortuitous, but, taken with other indications of connexion between the two schemes of alphabetical notation, I am disposed to accept the double evidence as more distinctly evincing a designed change.

22. 𐤀 = 𐤁 फ. The *ph*, unlike the *p*, which maintains its integral identity throughout, is subjected to changes and modifications that demand specification. Its Kapurdigiri indicator is freely developed, and the original idea of its formation, upon the basis of its own simple letter, may be traced in the additional stroke inserted in the onward course of the writing, beyond the perpendicular line of the parent 𐤀. In its ordinary written form it is with difficulty discriminated from a 𐤀, and this chance of confusion may possibly have led to the marked alteration which may be observed during its numismatic course to the 𐤀 of Godophares' money, and again to the + of Kadphises' mintages.

23. The Arian *b* is the letter of all others that most intimately identifies its own alphabet with the parallel Semitic offshoot of more Western culture. The derivation from some common parent being admitted in each case, it is curious to mark the independent development of the early Bactrian type of 250 B.C., as opposed to the stationary Phœnician ב in use under the Seleucidæ; and, progressing onwards, it is still more strange to note the large amount of derivative identity the Parthian letter of Ardeshír Bábegán holds in common with the Bactrian character of earlier days, as well as the close similarity of the joint resultants more definitively exemplified in the Partho-Bactrian coinage. Further, among the coincidences attending the evolution of alphabetical symbols, it is singular to note a parallel advance towards the most approved modern form of the character achieved *proprio motu* by the Palmyrene writing.[1]

24. 𐤄 = 𐤅 भ. The shape of this character is as well defined and equably sustained, as its value is undoubted; but little, therefore, need be said in reference to it. It would, indeed, have been a matter of interest to have traced the possible combination of alphabetical rudiments whence it derived its standard configuration; but, as our starting point for all comparisons consists in an already matured literal series of many centuries growth, it would be useless, in the absence of the more primitive forms, to institute any contrasts based upon materials apparently so largely modified from their primary outlines.

25. 𐤌 = म. At first sight the Bactrian *m* might be pronounced to

[1] [Gesenius, tab. v., pl. xi. *a*, and Type Table *infrá*.]

have nothing in common with the Semitisms of the Western alphabets; but on examining the question more closely, it seems by no means impossible to conceive that the Eastern product retained in effect a portion of the original elements of the ancient character. The rejection of the superfluous down stroke of the Phœnician *m*, which, as it stood, conflicted with the Arian *ḍi*, would reduce the former letter into the Eastern representative of *mi*, and the further necessity of again discriminating the uninflected consonant from this latter combination may reasonably have led to the ultimate simplification of the current form of the *m*, and the reservation of the cross stroke for its own proper purpose, as the sign of the medial vowel *i*.

26. ∧ = य. As with the *m*, I was almost on the point of pronouncing against any possible Semitic influence in the formation of the Bactrian *y*; but it is clear that, if the doctrine of intentional simplification of the characters under the needs and requirements of a more perfect language is to be held valid, much of the primary identity of the Phœnician ' might be traced in the form ultimately adapted to the Arian alphabet: here, again, a rejection of the redundant upstroke, which in the Eastern scheme constituted the suffix *r*, and the omission of the second down-stroke of the Western palatal, which expressed an *o* in the Arian series, would leave the character very much in the form extant upon the Kapurdigiri rock. Though I confess that, knowing as I do how much mere mechanical comparisons of forms, under imperfect data, are liable to mislead, I am unwilling to press such arguments, or to claim more than a possible association of minor coincidences, where the broad question is supported by such definite evidence.

27. ٦ = ।. र. The letter *r* of the Bactrian series, as found in the monuments of B.C. 250, is of high importance in proving at how much earlier a date it had become developed into the since dominant Hebrew form than the same character of the cognate alphabets of the West. That it is fundamentally the same letter in both may easily be conceded; and the manner in which the nearly fellow character, the *t* of one series, the *d* of the other, advanced into maturity, is likewise striking. The same may be said of the ٦ = व *v* of the Bactrian and the ו *wau* of the Western scheme. As a simple letter, the standard *r* remains but little changed. In combination, however, like the anuswára of the Bactrian system, it presents difficulties from the innate obstacles to the conjunction of the literal forms of Semitic alphabets, which, even under the necessities of Arian speech, seem to have progressed but slowly, and by imperfect rules, in this direction. The small back stroke at the foot of the covering consonant clearly

stands for the letter *r*; but it is a question whether the act of subjunction invariably implied the suppression of the short sound of *a* inherent in the leading consonant; and supposing such to be the ordinary intent and purport of the act of combination, it is doubtful whether the brief *a* is absolute after every open consonant. In the incompleteness of literal definition, so characteristic of all Semitic writing, much must necessarily have been left to the reader's knowledge of the speech so symbolized, to supply orthographical deficiencies; and as we find the compounds *San*, *Sin*, etc., so we may fairly assume that the *Dhrama* of Kapurdigiri and the *Dhramika* of the coins were intended to be read as *Dharma* and *Dharmika* (धर्म्म); the Southern Pálí of course duplicated the *m* in lieu of the compound *rm*. Major Cunningham has discovered a method of combining the *rm*, subsequently introduced into the Bactrian numismatic alphabet, whereby the ⌝ was run into the ∪ for the apparent purpose of stifling the intermediate *a*; and I am the more disposed to concur in this assignment, since I imagine I observe in all the words representing *Dharma*, wherein this compound is used, that the tail stroke of the usual subjunct *r* is rejected from its place at the foot of the *dh*.

Among other progressive efforts towards the due discrimination of the superposed *r*, I detect a remarkable, though solitary, instance of its expression by a dot above the succeeding consonant in the name of Arkhabiyas. This means of representing the *r* is somewhat in parallel accord with the system of the South, where the sign was figured as little more than a prolonged dot above the conjunct letter. But even among these Pálí alphabets we have no very positive example of its employment prior to the Sáh inscription at Girnár, though there is every reason to suppose that it was in use much earlier than the date of that writing.

28. The formation of the Bactrian *l* presents no peculiarity demanding comment. I may, however, note its representation by the letter *r* on the medals of Heliocles, and I may refer to the substitution of *l* for *r* in the Dhauli inscription, and the parallel interchanges of these letters in the Western languages of Persia. 'Jour. Roy. As. Soc.,' xiii., 375.[1] The Parthian *l*, it will be seen, retained much of the original figure of the Bactrian type, and had nothing in common with any of the direct offshoots from the Phœnician model.

29. ⌝ = व. The *v* of the Bactrian system may be fairly taken to correspond with the original idea of a Semitic ו *vau*; indeed, some of the intermediate forms of the latter consonant-vowel assimilate completely with the outline of the analogous semi-vowel of the Eastern series.[2]

[1] [See also 'Caldwell's Dravidian Grammar,' p. 120.]

[2] [Gesenius, p. 26, and tab. i., 4, 5; Judas, tab. i., and Type Table *infrâ*, series 1.]

The identities of the 𐨯 *v* have been already alluded to, vol. i., p. 103. The letter is only further remarkable for the difficulty with which it is at times discriminated from the nearly similarly outlined *t's* and *r's*. The intentional distinction seems to consist in the more straight formation of the head line, and the angularity given to its point of junction with the down stroke, which also participates in the lesser degree of curvature. At Manikyála a further divergence may be detected in the extra length given to the perpendicular line.

31. 𐨯 = 𐤑. I am unable to detect any direct affinity between the earliest monumental form of the common Bactrian *s* and the antecedent outlines of the Semitic 𐤑. The nearest approach, indeed, to the ordinary configuration of the Eastern letter is afforded in the 𐡎 of the Western system. The Duc de Luynes enters, under the Seleucidan period, a form of 𐤑 nearly identical with the Arian numismatic symbol, but the ascertainment of the value of the character is marked as doubtful, and even if finally admitted, I should prefer to pronounce in favour of its derivation from the Bactrian exemplar, rather than the indebtedness of the latter to the Western source. The formation of the Kapurdigiri *s* seems to have been effected by the delineation of a downward curve, but little dissimilar to the ordinary *b*, into which was inserted a perpendicular line,—a method of definition which the *Sinaitique* 𐤑 (*circâ*, 18 B.C.) seems singularly enough to have preserved. In progress of time the Arian *s* becomes more cursive, or rather takes such a form as should avoid the necessity of a second application of the pen. Under neither form does it seem to have anything in common with the Pálí 𑀲.

32. 𐨰 = 𑀰. The second, or palatal, *s* of the Arian series need scarcely be looked for among the signs of strictly Semitic origin, and may be accepted as an independent invention to meet the wants of Sanskrit vocalization.[1] The earliest Pálí form of this 𑀰, as I have before remarked, seems to have been borrowed from the Bactrian outline which stood for the 𑀱. The Southern edicts of Asoka make use of but one *s*, and the contrast between the two systems of writing, in this respect, may be readily exemplified in the word 𐨯𐨰𐨪 *susuśa* of the Arian inscription, which is written 𑀲𑀼𑀲𑀼𑀱 *susuṅsá* in the Girnár text (xiii., 3).

33. 𐨯 = 𑀱. The Arian *sh*, unlike the letter last referred to, must under every aspect be supposed to have had a counterpart in the languages of the West, and its identity in shape with the secondary

[1] [I have elsewhere adverted to a possible Parthian derivative from this character, but as the language of the Bilingual inscriptions, wherein the former occurs, is still undetermined, the value and association of the Western form remains purely conjectural. See 'Num. Ch.,' xii., 78.]

forms of the Phœnician ש is sufficiently striking. Its absolute inversion, under its Bactrian adaptation, need cause no surprise, as the obvious necessity of discriminating its power from the compound *me*, whose outline, under the local system of insertion of medial vowels in the body of the covering consonant, exactly imitated the configuration, and hence the latter may presumptively be taken to have conflictingly superseded the proper functions of the ordinary *sh*; which sibilant had therefore to be provided with a distinctive though not altogether novel form of character.

34, 35. า = अ ו = आ.[1] The Bactrian alphabet, in common with the Indian Pálí, possessed distinguishing signs for the long and short vowel *a*, though it was deficient in this respect in the quantitative symbols for the *i* and the *u*, for each of which a single form had to respond to the double articulations. The Arian system, like its Southern associate, duly contrasted the initial and medial outlines of both vowels and diphthongs. The initial forms of the soft and hard *a*'s are marked in plate xi., the authority for the latter resting solely on the numismatic character made use of, with dubious propriety, in the name of Apollodotus. The Kapurdigiri Inscription either does not mark the difference between the powers of the two vowels, whether initial or medial, or the failure to discover the additional sign, must be attributed to its shape and isolation from its covering letter, and the state of the surface of the rock, which was evidently opposed to its detection, unless the observer chanced to know sufficient of the language to expect and seek for the simple dot which constitutes the essential difference. As a medial, the short *a* may be held to be ordinarily inherent in each consonant; and the long *a*, in appropriate coincidence with the arrangement of the other vowels, is defined by the detached dot, the discriminating adjunct of the *á* initial.

The Bactrian ו admits of no approximation to any of the purely Semitic forms of א; indeed, it approaches nearest in identity to another

[1] [Colonel Rawlinson has annexed to his exposition of the value of the Persian cuneiform *a* an elaborate note ('Jour. Roy. As. Soc.,' vol. x., pp. 54, 78), on the general subject of Arian *a*'s and their correspondents in the Semitic system. One of the few points upon which I altogether dissent from his conclusions is his assumed derivation of the Parthian and Sassanian *a*'s from the original Hebrew ע *Ain*. The languages in question, so far as we have present knowledge of them, did not need any alphabetical symbol for the latter utterance; indeed, when Arabic came to be written in Pehlvi characters, the simple ܐ of the old series had to perform the representative functions of the foreign articulation. It seems much more reasonable to infer that the Eastern copy of the *a* (whether exclusively devoted to that vowel, or permissible as a substitute for ע in the conterminous dialects), was based upon some of the varying forms of the original Phœnician *a* rather than upon the outline of a letter for which the adapters had little or no use, and whose normal and subsidiary configurations were almost without exception opposed to the graphic delineation eventually adopted into the derivative alphabets. *Cf.* also Gesen., p. 21, etc.]

letter of the Western series, namely, the פ. It is possible that this character may have been incorporated from the common stock, and subjected to new duties; but I should prefer to suppose a positive invention of a new character, or a very marked simplification of the complicated cross-strokes of the earliest א, rendered requisite, like many of the other changes, by the necessity of avoiding complex outlines among the radical letters, with a view to their facile reception and legible representation of the short vowels in combination.

The radical form of the full or initial Arian ϑ = *a* claims extraneous attention, in the fact that its outline constituted the basis for the construction of all the other vowels and diphthongs of its own alphabet, which are severally distinguished by the additional marks supplemented in each case to the normal *a*, while the same discriminating signs suffice, in combination with consonants, to represent the medial form of their several fundamental letters.

An indication of no little importance in the question of derivations, developed by this law, is to be detected in the imitation and simplified extension of the orthographical rule of the Pálí, which took the inital ꓘ as the basis of certain other vowels and diphthongs, discriminating them from the simple letter *a* by supplemental additions; thus ꓘ *a* became ꓘ̄ *á*, ꓘ *o*, ꓘ̇ *an*, etc., while *i*, *e*, *u*, had separate forms. The Arian scheme, following out this notion with more effective systemization, made ϑ the groundwork of the entire vocalic series.

38. The vowel *u* demands a passing notice, rather for the modification it undergoes than for any difficulty in its recognition. The initial on the Kapurdigiri rock is formed by the addition of a foot-line to the standard *a*, in the forward direction of the writing; and a similar mark effectively fulfils the duty of the medial vowel in combination with consonants. An optional interchange of symbols for the initial may be observed on the coins of Eukratides, which is instructive as evincing the limited precision of the orthographical science of the period. In some cases the opening syllable of this name is defined by a combination of the medial sign of the *e* prefixed to a squarely-outlined *u* initial; in others, the sound of *eu* is represented by a fully developed initial *e*, followed by an unattached and completely formed initial *u*. The numismatic *u* medial is speedily transformed into a loop, which form it retains throughout its later monumental course.

41. The equivalent of the Sanskrit अं *an* is formed in the Kapurdigiri inscription of the subjunction of an arrow-point to the foot of the normal ϑ *a*, and may reasonably be supposed to figure in convenient modification of the standard ∪ *m*, whose sound it convertibly responds to. A similarly outlined suffix is used for the same purpose in com-

bination with consonants, as in Kambayi, Gandharanam (tab. v.). On coins the stiffness of the adjunct is amended by its transformation into a semicircular curve in continuation of the down stroke of the ϑ *a*, a symbol which, it may be remarked, still retains the elements of the primary ∪ *m*. The change may be attributed to the greater facility of expression, incident to the continuous use of the pen in current writing, as contrasted with the earlier chisel sculpture of lapidary epigraphy, which had nothing to gain by uninterrupted lines. This numismatic suffix appears frequently on coins and inscriptions of more recent date conjoined with the letter Ϸ *s*, in positions, as regards the latter, which clearly necessitate the interpretation of the compound as *san*, 'year;' though I notice an apparent inability to define the requisite *anuswára* in combination in the names of Menander, Amyntas, and Gondophares, which it is difficult to account for.[1]

32. The *st* of the Bactrian alphabet is remarkable as being the only standard compound consonant in the entire range of the Kapurdigiri edict; the subjunction of the *r* was allowable with any consonant that required the combination; but the suffix of the *t*, or rather its incorporation with another character into a distinct sign, was reserved for the conjunction now cited; and this compound retained so much of the force of a distinct letter that it admitted of the insertion of a vowel or the subjunction of the *r* like any other simple consonant. The divergence from the Kapurdigiri outline in the later examples of its use is limited to a straightening off of the cross-lines, whereby it is conveniently discriminated from the character *i* or *hi*, with which it was otherwise liable to be confounded.

Before taking leave of these imperfect contributions to the

[1] [Colonel Rawlinson attributes these omissions to a general orthographical law common to the Persian cuneiform and the Bactrian systems. His remarks on the subject are as follows:—

'I need not multiply examples of the absorption of the nasal, as the first member of a compound articulation; for I have already, as far as argument is concerned, abundantly verified the existence of such an orthographical law; and it is one, moreover, with which the identical construction of the numismatic Bactrian[a] has long ago familiarized Orientalists.'

Colonel Rawlinson is in error in regard to the second and third names quoted, the insertion of the *anuswára* is palpable and undoubted, and, when looked for, it is visible enough in one instance in Major Cunningham's plates, on whose authority I conclude the author speaks. The Kapurdigiri inscription further evidences that this assumed rule, if sound at all, is, in practice, rather constant to the opposite effect, as I may instance at hazard from the names of Devanampriya, Antiyoke, Antikina, and the words pashandeshu (tab. v.), athasantiranaya (tab. vi.), etc.]

[a] 'Remark the orthography of the names of Menander, Antimachus, Antialkidas, Amyntas, etc. In Indian Pâli the nasal is preserved before the consonants of all classes. See 'Essai sur le Pâli,' p. 80.' 'Jour. Roy. As. Soc.,' x., 132.

history of Bactrian Palæography, and terminating these introductory remarks by the exhibition of the positive data of facsimiles, I desire to advert cursorily to the Parthian or Chaldæo-Pehlvi and the cognate Sassanian-Pehlvi literal series, exemplars of each of which have been inserted in pl. ix. The first of these claims its position in the general inquiry, in appropriate elucidation of many of the alphabetical coincidences and derivative identities already adverted to; the second founds its title to notice, in this place, upon its apposite intermediary position in the progressive palæographic development of the writing of Asia and the important part it will be seen to have played in its position, as the sole apparent vehicle of speech, whether official or domestic, under the specially national reconstitution of the Persian empire,[1] and the influence that, even in its official extinction, it carried with it into the learning and literature of the conquering Arabs;[2] while its alphabetical forms and difficultly-comprehensible language survive so largely in their fitting

[1] [ I have for long past insisted upon one deduction of high import in the history of the Zoroastrian languages, 'in the significant fact implied in the extensively prevailing use of the Pehlvi character, as *primâ facie* evidence of the existence and currency of the language itself, or of its mere dialectic modifications. I would cite the universality of its influence throughout nearly the entire Persian empire; its employment as the vehicle of expression for the monumental records of the kings; its uniform official currency in the numerous mints of the Sassanian empire; and the geographical definition of its boundaries from the Tigris and the Persian Gulf on the S.W., to Merv and Zábulistán on the N.E., as manifested by the legends on the Arab coins issued within or near those limits. But beyond this I would now exhibit its acceptance in the affairs of private life, as exemplified by the prevalence of its literal forms on the signets and seals of every-day use. And I would claim this much of deduction from the facts available, that whatever other forms of speech may have existed in the land, whatever of more perfect systems of writing may have been known or employed, it is clear that the seventeen letters of the Pehlvi alphabet sufficed to express all that either official routine or ordinary business transactions required. From our inscriptions and coins we can fix with precision the date of the currency of this style of writing, and unhesitatingly claim its dominance in Persia from A.D. 223 to A.H. 76 (A.D. 695). Our new authorities, the gems, do not of themselves similarly define their own epoch; but we may hope, by testing the forms of the alphabet, and observing closely other significant indications, to fix approximately their place in history.'—'Jour. Roy. As. Soc.,' vol. xiii., p. 374 (1852). See also Westergaard, 'Zendavesta,' i. 19 (Copenhagen, 1854).]

[2] [ Here is their own testimony to one most important fact in the history of civilization:—در عهد عبدالملك جراید دیواني از صورت فارسي باعربي نقل کردند و رقوم بنیاد نهادند M.S. 'Târikh Guzídah.' Even so late as 318 A.H. the Arabs were still translating Pehlvi books.—See Reinaud, 'Abulféda,' p. xlv.]

places as monumental, numismatic, and personal records, or the more isolated but carefully-guarded religious services, which, in return, have, in these days, led to the comprehension of one section of the historical epigraphy,[1] otherwise, to us, so enigmatically endorsed upon the less perishable materials of metal or gems.

As I have ventured to infer a derivation of the more distantly cultivated and more obviously divergent Bactrian alphabet from a parentage in common with or intermediately through the Phœnico-Babylonian, it is demanding but scant faith to ask for a more direct concession of the influence of the latter upon the Parthian or Chaldæo-Pehlvi of almost indigenous site, and which, epochally speaking, is so limitedly varied from its obvious prototype.[2] The Sassanian hereditative, and for a long time

[1] [J. Olshausen, 'Numismatic Chronicle,' vol. xi., p. 62.]

[2] [It may be as well to indicate, as far as possible, the surface over which there is extant evidence of the spread of this character. Inscriptions graven in its letters, in parallel association with the Sassanian Pehlvi, are to be found—1st, at Persepolis; 2nd, at Shahrzor (35° 50′, 44° 24′); and 3rd, at Pâí Kúlí, within the Turkish frontier southward of Sulimánia, which latter have only recently been discovered by Sir H. Rawlinson, who further states that isolated but earlier varieties of this character are to be found in inscriptions at—1, Amadiah; 2, Holwán; 3, Shimbor, in the Baktiari mountains; and 4, at Bebahán. Or, to state the case generally, the style of writing has an Eastern limit of 150 miles beyond the Tigris. Further, it is found on certain classes of Imperial Parthian coins ('Vologeses,' iii. etc.), as well as on several varieties of local issues, which up to this time are supposed to be sub-Parthian or Partho-Persian mintages. The most modern date of its use in inscriptions is to be referred to the reign of Shápúr I. (A.D. 240 to 273); indeed, it would appear to have been speedily superseded by the more readily discriminated Sassanian Pehlvi, in which alone the monumental records (Ker Porter, vol. ii., pl. lxviii.), and the coin legends of his successors are couched. *Cf.* 'Philosophical Transactions,' vol. xlix., p. 593, pl. xviii. (1756). Pellerin 3me 'Supplément' (1767), pl. i., fig. 13, p. 32. De Sacy, 'Mémoires sur diverses Antiquités de la Perse,' pp. 72, 136, 202, etc. Ouseley, 'Medals and Gems' (London, 1801). 'Mionnet,' v. 686. Millingen's 'Sylloge' (London, 1838), p. 84. Ker Porter, pls. xv., xxii., xxviii., etc. Rich's 'Babylon and Persepolis' (London, 1839), pl. xii. 'Ariana Antiqua,' pl. xv., fig. 23, etc. Rawlinson, 'Memoir on Persian Cuneiform Inscriptions,' 'Jour. Roy. As. Soc.,' vol. x., p. 118, *et seq.*; and my Pehlvi Alphabets, 'Jour. Roy. As. Soc.,' vol. xii., p. 262; and vol. xiii., p. 3. Westergaard, 'Bundehesh,' p. 84 (1851). 'Numismatic Chronicle,' vol. xii., p. 63; and Dr. Scott's papers, vols. xvii. xviii. *ibid.* Lindsay, 'View of the Coinage of the Parthians,' (Cork, 1852). 'Haug. Ueber die Pehlewi-Sprache' (Gott. 1854).

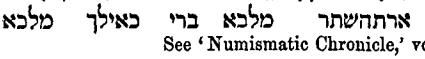
While adverting to Parthian writing, I feel bound to notice a somewhat pretentious article, recently published, which professes to interpret the legends on several classes of sub-Parthian currencies. The paper in question is inserted in the 'Zeitschrift' of the present year (1857), p. 700, under the title of 'Lettre, etc., sur quelques médailles à légendes iraniennes de l'epoque Arsacide, par Comte A. de Gobineau' (Téhéran, le 12 Mars, 1857). As the author seems to have been altogether un-

contemporary character, is not perhaps so manifest an emanation from the same source, but of the absolute fact there can be no reasonable question, though the ordinary course of mechanical induction leaves this much doubtful, as to whether the Sassanian was derived by independent action from some purely Semitic stock, or whether it was a local improvement upon the intermediate Parthian character of anterior currency and official prominency in their joint monumental association: I myself should certainly prefer the latter inference.

acquainted with De Sacy's elaborate investigations into the alphabet of cognate type, which appears in the numerous bilingual inscriptions of the early Sassanians, I may be held excused from withholding my general acquiescence in his readings; but, to show how fallacious his system of decipherment has proved, even in his own hands, I may remark that on his coin No. 7 (Numismatic Chronicle,' vol. xii., pl. p. 68, figs. 5, 6, 7), he detects the word *malka* (or *meleky*, as he transcribes it), in one portion of the legend, while its repetition in the same epigraph altogether escapes him, as equally do the same duplicate titles on his piece No. 1. The interpretation he assigns to the legend on this latter coin I reproduce, as a test of the probable value of the rest of his definitions.

KYOUVA SETRY VAHYA ARHSAK.
'Le Roi de race pure, Arhsak.'

My own reading of the legend of a similar coin, a facsimile of which is prefixed to the modern transcript, is as follows:—



ארתחשתר מלכא ברי כאילך מלכא

See 'Numismatic Chronicle,' vol. xii., pl. No. 8.

While upon this subject, I may take occasion to refer to my original transcription of the legend on the unique coin of Hormuzd II., brought from Persia by Sir H. C. Rawlinson (Num. Chron.,' vol. xv., p. 180; 'Jour. Roy. As. Soc.,' vol. xiii., p. 379). Dr. Scott, in commenting upon my transliteration as opposed to that of Dr. Mordtmann, while confessing that the shapes of the letters on the coin itself better accord with my version than that of the author just named, accepts the interpretation of the latter, or אוהרמזדי לבני רושאן '(of) Ormuzd, of the god of light,' in preference to mine, in virtue of its having the advantage of 'being comprehensible!' (Num. Chron.,' vol. xvii., p. 166). As I did not pretend to translate my transcript, which was grounded simply on mechanical data, I could have no objection to so much of condemnation; but, in truth, my version, with the interpretation I now append, not only makes very excellent sense, but it has the higher merit of according far more precisely with the typical indication afforded by the monarch's head-dress, which is formed after the conventional model of the Hercules' head, so frequent on the Greek coins, with the covering of a lion's skin. My transliteration ran—

מזדיסן בני אוהרמזדי לבאבושאן מלכאן מלכא

The לבאבושאן—the only doubtful portion of the whole—I understand to mean 'lion killing.' The mixture of Aramaic and Persian in the compound need cause no surprise; neither, I am bound to add, is the orthographical expression of the participle in accord with modern Persian grammar; but these objections are infinitessimal in the interpretation of so irregular and little-known a language as that used in the official records of the early Sassanians.]

The next step in the onward course of the Sassanian alphabet, its merging into the Pehlvi of the early Arabs in Persia, which is nearly literatim the same as the Pársís have preserved in Kermán and Gujarát, admits of no possible cavil: how much of the essence of these modified letters the Arabs took into their own superseding Kufic has only been partially investigated, and hitherto insufficiently allowed for; but the number of the normal forms of Pehlvi that have passed into and been reproduced in the so-called Zend alphabet are palpable and manifest on the most cursory inspection; and whatever may be the real antiquity of the language of the Avestá, couched in these letters, there can be but one opinion as to the comparatively recent date at which the characters themselves must have been compounded out of more ancient systems of writing.

I now exhibit the Plate of Comparative Alphabets, which I have prepared in supersession of Prinsep's original plate xi. and to complete the data for testing the rise and progress of the Bactrian alphabet from its Semitic elements, I have appended the two plates of the modifications of that class of literal symbols so obligingly prepared for me by the Duc de Luynes, whose original introductory notice I insert in explanation of the derivation of each.[1]

ALPHABET PHÉNICIEN (PHÉNICIE PROPRE).

*Du temps de Sargon.*—Les lettres ב, ד, י, ל, ע, פ, ר, ת, sont prises dans les légendes des deux pierres gravées à inscriptions, découvertes par M. Place sous les taureaux du Palais de Sargon.[2] Les autres lettres sont tirées de pierres gravées à

[1] [It is a pleasure to me to record the circumstances under which I have to acknowledge M. le Duc de Luynes as a coadjutor in this Essay. During a passing visit to Paris, I was made aware that he had most liberally permitted the Numismatic Phœnician type, prepared for the illustration of his own privately circulated works, to be made use of in the printed sale-catalogue of the Baron de Behrs' coins. Encouraged by this concession, I ventured to solicit a similar favor in my own case, so far as a single elucidatory alphabet was concerned. I need not add that this request was readily complied with; but moreover, on my subsequently addressing M. de Luynes, with a view to obtaining a more precise idea of the epoch and localities to which these specimen letters were due, I was surprised and gratified by a promise of a mature and comprehensive review of the entire question of Phœnico-Semitic Alphabets, of which the present materials exhibit the performance.]

[2] Ces légendes sont: עברבעל et רפתי Obadbaal et Riphothiah.

THE BACTRIAN OR ARIAN ALPHABET. Pl. XI.

| English | Indian Pâli | Lapidary Bactrian | | Numismatic Bactrian | | | |
|---|---|---|---|---|---|---|---|
| k | | | | | | | |
| kh | | | | | | | |
| g | | | | | | | |
| gh | | | | | | | |
| ng | | | | | | | |
| ch | | | | | | | |
| chh | | | | | | | |
| j | | | | | | | |
| jh | | | | | | | |
| ñ | | | | | | | |
| ṭ | | | | | | | |
| ṭh | | | | | | | |
| d | | | | | | | |
| ḍh | | | | | | | |
| ṇ | | | | | | | |
| t | | | | | | | |
| th | | | | | | | |
| d | | | | | | | |
| dh | | | | | | | |
| n | | | | | | | |
| p | | | | | | | |

| English | Indian Pâli | Lapidary Bactrian | | Numismatic Bactrian | | |
|---|---|---|---|---|---|---|
| ph | | | | | | |
| b | | | | | | |
| bh | | | | | | |
| m | | | | | | |
| y | | | | | | |
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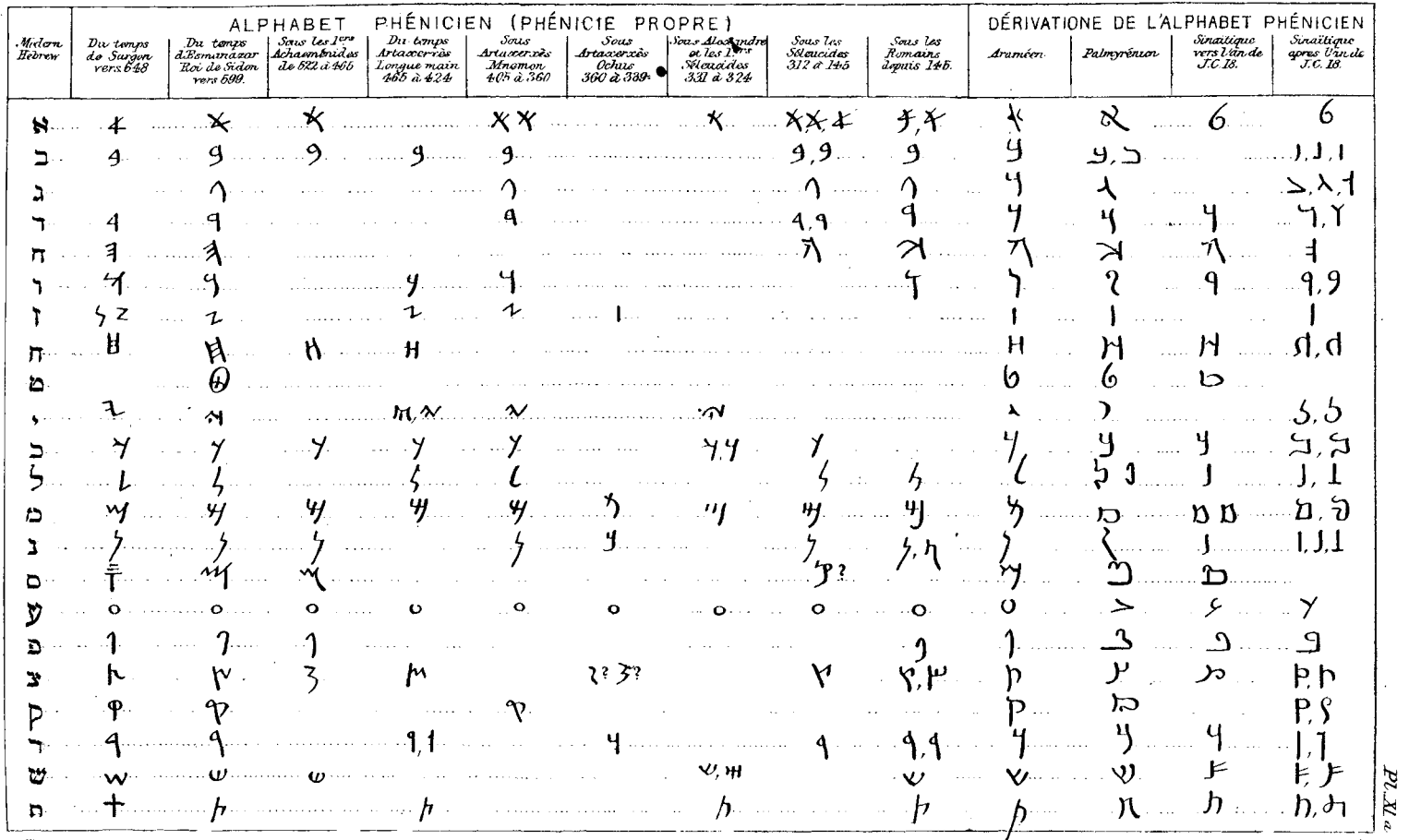
| st | | | | | | |
| sp | | | | | | |

ANCIENT PEHLVÍ ALPHABETS: (PARTHIAN & SASSANIAN.)

| Modern Hebrew | Parthian | Sassanian | Modern Hebrew | Parthian | Sassanian | Modern Hebrew | Parthian | Sassanian |
|---|---|---|---|---|---|---|---|---|
| א | | | ר | | | ם | | |
| ב | | | ז | | | נ | | |
| פ | | | ס | | | ו | | |
| ת | | | ש | | | ה | | |
| צ | | | כ | | | י | | |
| ח | | | נ | | | | | |
| ד | | | ל | | | | | |

E.T. West & Co. lith.

Published by Stephen Austin, Hertford.



| Modern Hebrew | ALPHABET PHÉNICIEN (PHÉNICIE PROPRE) | | | | | | | | | DÉRIVATIONE DE L'ALPHABET PHÉNICIEN | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Du temps de Surgon vers 648 | Du temps d'Esmanazar Roi de Sidon vers 599. | Sous les 1ers Achaemenides de 522 à 465 | Du temps Artaxerxès Longue main 465 à 424 | Sous Artaxerxès Mnemon 405 à 360 | Sous Artaxerxès Ochus 360 à 339 | Sous Alexandre et les 1ers Séleucides 331 à 324 | Sous les Séleucides 312 à 145 | Sous les Romains depuis 145. | Araméen | Palmyrénien | Sinaïtique vers l'an de J.C. 18. | Sinaïtique après l'an de J.C. 18. |
| א | | | | | | | | | | | | | |
| ב | | | | | | | | | | | | | |
| ג | | | | | | | | | | | | | |
| ד | | | | | | | | | | | | | |
| ה | | | | | | | | | | | | | |
| ו | | | | | | | | | | | | | |
| ז | | | | | | | | | | | | | |
| ח | | | | | | | | | | | | | |
| ט | | | | | | | | | | | | | |
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| ל | | | | | | | | | | | | | |
| מ | | | | | | | | | | | | | |
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| ס | | | | | | | | | | | | | |
| ע | | | | | | | | | | | | | |
| פ | | | | | | | | | | | | | |
| צ | | | | | | | | | | | | | |
| ק | | | | | | | | | | | | | |
| ר | | | | | | | | | | | | | |
| ש | | | | | | | | | | | | | |
| ת | | | | | | | | | | | | | |

Pl. XI a

W. West Lith.

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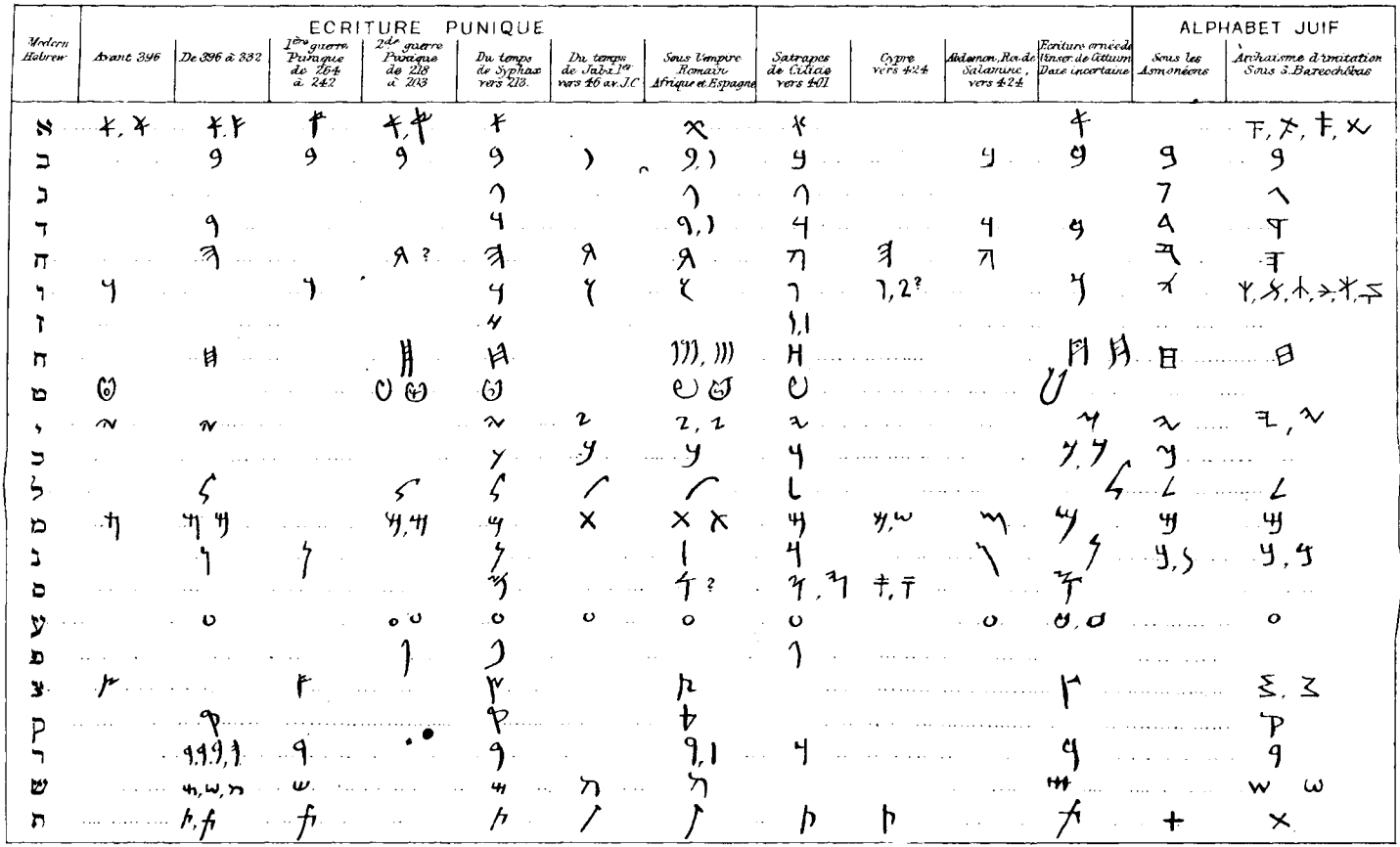

ECRITURE PUNIQUE
ALPHABET JUIF
Ordre Hébreu
Avant 396
De 396 à 332
1ère guerre Punique de 264 à 242
2de guerre Punique de 218 à 203
Du temps de Syphax vers 210.
Du temps de Jubal Ier vers 46 av. J.C
Sous l'empire Romain Afrique et Espagne
Satrapes de Cilicie vers 401
Cypre vers 424
Abdonim, Roi de Salamine, vers 424
Ecriture arméenne Sinaï de Attuni Date incertaine
Sous les Asmonéens
Archaïsme d'imitation Sous S. Bareochébas

PL. XI b.

W. Wist. Lith.

légendes plus ou moins longues, dont plusieurs caractères font partie des légendes sur les deux pierres gravées de M. Place et doivent, par là, se rattacher au même alphabet.

*Du temps d'Esmunazar.*—Alphabet tiré de la longue inscription sur le Sarcophage de ce Roi. ['Journal Asiatique,' Avril-Mai, 1856.]

*Sous les 1ers Achæménides.*—Cet alphabet est formé des légendes sur les médailles les plus archaïques d'Aradus: Tête virile barbue et laurée. Revers, Navire; au dessus א, מ, suivi de lettres numérales variées, ח, ב, נ, ם, ע, פ; les lettres צ et ש se trouvent sur des pièces d'argent des anciens Rois de Perse représentant un Roi frappant de son poignard un lion dressé devant lui; auprès, ש, et au revers: N(i)S(i)B נצב au dessus d'une ville à tous crénelées, &c. Cette pièce est au Musée britannique.

*Du temps d'Artaxerxès Longue-main.*—Tiré des médailles d'or et d'argent des Rois de Tyr, de Cittium et des Chittim (*cf.* mes Satrapies).

*Sous Artaxerxès Mnémon.*—Tiré de la numismatique des Rois de Gebal (Byblos) vivant probablement à cette époque (*cf.* mes Satrapies), et de médailles encore inédites de cette dynastie dans ma collection.

*Sous Artaxerxès Ochus.*—Tiré des Dariques de mauvais travail frappées sous ce Prince.

*Sous Alexandre et les 1ers Séleucides.*—Monnaie d'or et d'argent aux types d'Alexandre frappée sous son règne et sous ses premiers successeurs à Joppé, Acé, Aradus, et Thœma.

*Sous les Séleucides, de* 312 *à* 145.—Lettres isolées et numérales sur les médailles d'Aradus, de Tyr et de Sidon, frappées sous la domination de ces Princes. Médailles de Tyr frappées sous Antiochus IV. et Demetrius II. et de Laodicée au revers d'Antiochus IV.

*Sous la domination Romaine, depuis l'an* 145.—Monnaie en cuivre d'un travail de décadence frappée à Sidon, Tyr, et Marathus.

## DÉRIVATIONS DE L'ALPHABET PHÉNICIEN.

*Araméen.*—Manuscrits sur papyrus appartenants au Duc de Blacas. Gesenius paraît croire que ces Manuscrits qui font mention de la captivité d'un peuple en Egypte, sont allusifs à celle des Hébreux et pourraient être contemporains. En tout cas, ils sont très anciens. Cependant, le monument de Carpentras, portant une inscription de même écriture, ne paraît pas remonter à une époque très reculée.

*Palmyrénien.*—La plupart des Inscriptions Palmyréniennes connues ne sont pas plus anciennes que les premiers Empereurs Romains et ne dépassent guères l'époque d'Alexandre Sévère mort en 235 de Jés. Chr. Cependant, il existe une médaille presque archaïque, frappée à Sidé de Pamphylie, dont la légende est évidemment en caractères palmyréniens (voir mes Satrapies).

*Sinaïtique vers l'an de J.C.* 18.—Cet alphabet est tiré de médailles encore inédites de Rois des environs de la mer rouge et de l'Idumée, dont le principal date ses monnaies de l'an 330 (des Séleucides).

*Sinaïtique après l'an de J.C.* 18.—Alphabet établi par M. Beer d'après les inscriptions de Gebel Mocatteb. Inscr. veteres litt. et ling. hucusq. incogn. ad mont. Sin. magn. num. repert, &c. Lipsiæ, 1840, 4to.

## ECRITURE PUNIQUE.

*Avant* 396.—Médailles archaïques de Motya, Tsits et Aea, frappées en Sicile. Motya fut détruite en 396.

*De* 396 *à* 332.—Médailles de travail grec avec les types de Cérès et de Proserpine, adoptés par les Carthaginois seulement depuis 396, époque où ils commencèrent à honorer ces Déesses, et pièces frappées avec le type du droit imité des monnaies d'Alexandre.

*Première guerre punique.*—Médailles au type de la tête de Cérès et du cheval ou du Pégase, d'un bon travail, et que l'on trouve en grande abondance en or, argent, et cuivre.

*Seconde guerre punique.*—Les mêmes types ou peu variés, mais d'un travail de décadence et de métaux d'un tître bien plus bas.

*Syphax.*—Médailles de bronze de ce Roi et inscription de Marseille exactement de la même épigraphie que les légendes de Syphax.

*Juba* 1*er*.—Monnaies de ce Prince en argent et cuivre.

*Empire Romain.*—Monnaies puniques d'Espagne et d'Afrique avec des types impériaux en conformes par leur écriture à celles qui portent ces types.

*Satrapies de Cilicie* et particulièrement ceux de Tarse (*cf.* mes Satrapies).

*Cypre vers* 424.—Médailles de Salamine, frappées probablement sous le gouvernement d'Abdemon. La lettre ת appartient à une médaille d'Amathus de la même époque.

*Abdemon, Roi de Salamine.*—Abdemon, Satrape de Cypre, régnait à Salamine. Une médaille de ce Prince, que je possède, porte son nom, עברחמן.

*Ecriture ornée de l'Inscription de Cittium,* époque incertaine mais probablement reculée.

L'Inscription en question est celle du Musée d'Oxford reproduite par Gesenius dans ses 'Monumenta Phœnicia,' pl. xi., inscr. No. ix., 2 B.

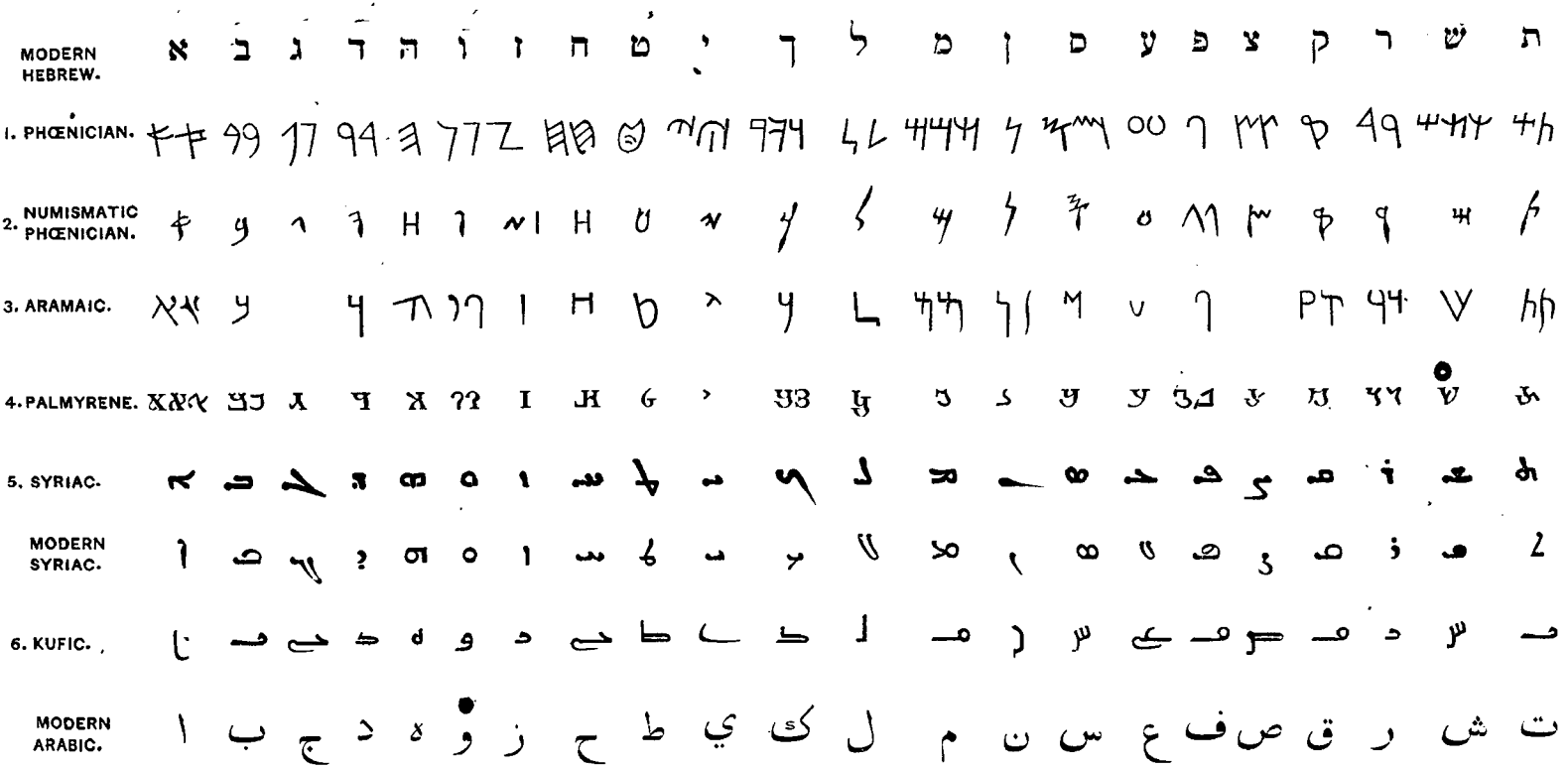
## TYPE TABLE OF SEMITIC ALPHABETS.

I have but little to say in commendation of the subjoined type table of comparative Semitic alphabets, the majority of which consist of such reproductions of the materials of early commentators as the German type-founders chanced to have prepared for the use of printers.

The series Nos. 1, 3, and 4, which are based upon Gesenius' plates, were procured for the casual illustration of the general subject, before I was favoured with the elaborate and more mature facsimiles of the Duc de Luynes, which in a measure supersede the less comprehensive alphabets in type metal,[1] though I have permitted these latter to stand in their introductory capacity, for the purposes of facility of reference. The Kufic literal signs are likewise of but limited palæographic

[1] [The fourth or Palmyrene series is peculiarly infelicitous in its rendering of the forms of the originals; however, M. de Luynes' facsimiles will amend its deficiencies.]

# TABLE OF SEMITIC ALPHABETS.

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value, as they do not represent the earliest form of that adaptive alphabet.[1] There are, however, two sets of characters (not of German execution) to which I desire to call attention. No. 2 comprises the Numismatic Phœnician cut for the Duc de Luynes, and imitated principally from the forms of letters prevailing on the coins of Cilicia and Cyprus. The alphabet No. 5 is, likewise, a novelty, for which I am indebted to the Rev. W. Cureton,[2] who explains its derivation in the following terms :—

'The type was principally copied from MSS. of the 6th century, and represents the earliest form of the character known to us. It is identical with that of the most ancient MS. in the British Museum, date A.D. 411; but the forms of the letters are made a little more carefully than they were written by the person who copied that MS., and imitate more closely those of some better scribe, although about a century later.'

The alphabet in question claims a double interest, in exemplifying the earliest extant Syriac writing, as well as in its near identity with the Estrangelo graven on the celebrated Nestorian monument of Si gan Fu, dated in the 8th century,[3] while its progress on its Central Asian course, thus clearly marked, illustrates the parentage of the Mongol alphabets, whose derivation from a Syriac source has long been freely conceded.

[1] [A valuable contribution towards the study of the palæography of the Arabs has been furnished by J. C. Lindberg ('Lettre à M. Bröndsted.' Copenhagen, 1830), from whose work I cite the following note on the earlier authorities on the subject:—I. G. C. Adler. 'Descriptio codicum quorumdam cufícorum in bib. reg. Hauniensi.' Altonæ, 1780. Silvestre de Sacy. 'Mémoires sur l'origine et les anciens monumens de la littérature parmi les Arabes.' 'Mém. de l'Académie,' vol. l., p. 247. The same. 'Notices et Extraits,' etc., vol. viii., p. 209; and 'Journal Asiatique,' 1827. M. Kopp. 'Bilder u Schriften der Vorzeit,' ii., 287.—To these I may add Marcel's 'Palæographie Arabe,' Paris, 1828. 'Ibn Khallikan,' Orient. Trans. Fund, pp. xv., xvi., etc.; and lastly, I would refer to M. Renan's comprehensive review, p. 320, in his 'Histoire générale des Langues Sémitiques,' 1855. While referring to Kufic writing, I must not omit to call attention to the interesting copper-plate grant to the Christian Church in India—which bears the signatures of attesting witnesses—severally in Kufic, Pehlvi, and Hebrew characters. 'Jour. Roy. As. Soc.,' vol. vii., p. 343. 'Madras Journal of Literature and Science,' vol. xiii. (1845), pl. viii.]

[2] [Or I should rather say my obligations are due to Mr. Watts, of Crown Court, to whom the type properly belongs.]

[3] ['La Chine d'Athanase Kirchere.' Amsterdam, 1670.—'Assemani,' iii., 2nd part, p. 738. Romæ, 1728.—M. Huc. 'Christianisme en Chine,' p. 48. Paris, 1847.—'Journal of the American Oriental Society,' vol. v., p,. 278.—Reinaud, 'Géogr. d'Aboulféda,' p. 365.—Renan, 'Hist. Gén.,' vol. i., p. 268.]

Finally, I have introduced a set of Zend letters, more with the object of completing the series of cognate alphabets, than for any credence I wish to claim for them among the other palæographic memorials of the ancient currency of which we have good and authentic proof; and, for the purposes of direct comparison, I have prefixed to this enlarged alphabet the several original Pehlvi characters upon which the Zend correspondents seem so obviously to have been formed.[1]

## II. ARIAN NOMENCLATURE.

I do not propose to recapitulate the Arian transcriptions of the Greek names; the details of each, together with the variations in the standard orthography, will be found duly marked in the Coin Catalogue, and most of their peculiarities will have already been considered in the determination of the alphabet in whose literal forms they are expressed. The same may be said of the Oriental names, which in process of time superseded the Greek designations, and where the definition must be supposed to be authoritative under its Arian form rather than in the now imitative transcript in Grecian characters. It may, however, be useful to summarize the Arian titles, whether direct translations or local equivalents of the leading idea of titularization adopted from the conquerors, even if it be merely to avoid the tedious repetition of interpretations on the recurrence of each king's little-varied epithets.

1. The more common indigenous titles of *Maharaj*, 'great king,' and its superlative combinations of *Rajadhiraj*, 'king over kings,' and *Rajaraja*, 'king of kings,' scarcely require notice.

2. The equivalent of the Greek σωτήρ is rendered by the word *Tradata*, a provincial derivative from त्रा, 'to preserve'; and here, as in all cases, I adhere to the manifest orthography

[1] [This Zend type, like the early Syriac just acknowledged, is also the property of Mr. Watts. The very excellent Pehlvi fount, as has been already noticed, belongs to Messrs. Harrison and Co., St. Martin's-lane.]

# ZEND ALPHABET.[1]

## VOWELS.

| | | | | | | |
|---|---|---|---|---|---|---|
| SHORT VOWELS, | *Pehlví,* | *a.* | | *i.* | *u.* | |
| ,, | *Zend,* | *a.* | *e.* | *i.* | *u.* | |
| LONG VOWELS, | *Pehlví,* | *ai.* | *í.* | | | |
| ,, | *Zend,* | *á.* | *í.* | *ú.* | *è.* | *ê.* |
| ,, | *Zend,* | *o.* | *ó.* | *áo.* | | |

## CONSONANTS.

| | | | | | | |
|---|---|---|---|---|---|---|
| GUTTURALS, | *Pehlví,* | *k.* | *hu.* | | *g.* | |
| ,, | *Zend,* | *k.* | *kh.* | *q.* | *g.* | *gh.* |
| PALATALS, | *Pehlví,* | *ch.* | | | *j.* | |
| ,, | *Zend,* | *ch.* | | | *j.* | |
| DENTALS, | *Pehlví,* | *t.* | | | *d.* | |
| ,, | *Zend,* | *ṭ.* | *ṭh.* | *th.* | *d.* | *dh.* |
| LABIALS, | *Pehlví,* | *p.* | | | *b.* | |
| ,, | *Zend,* | *p.* | *f.* | | *b.* | |
| SEMI-VOWELS, | *Pehlví,* | *i* or *y.* | | *r.* | | |
| ,, | *Zend,* | (med.) *y.* | | *r.* | (» med.) *v.* | |
| ,, | *Pehlví,* | *v.* or *w.* | | *h.* | | |
| ,, | *Zend,* | *w.* | | *h.* | | |
| SIBILANTS, | *Pehlví,* | *s.* | | *sh.* | | *z.* |
| ,, | *Zend,* | *s.* (*ç.*) | *sh.* | *s.* | *ĵ* | *z.* |
| NASALS, | *Pehlví,* | *n.* | | | | *m.* |
| ,, | *Zend,* | *n.* | *ñ.* | *an.* | *ğ.* | *m.* |

[1] The definition of the Zend Alphabet is adopted from Spiegel's 'Grammatik der Pârsisprache;' the Pehlví series is confined to the older and unpointed forms.

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of the original, without attempting to reconcile the deviations from the laws of Sanskrit grammatical construction, or to trace the process of vernacular degradation; it is sufficient to say that, having the Greek counterpart, and ordinarily an appropriate Sanskrit root, we must remain content to take the inflections and orthographical variations the die engravers have left behind them.

3. The *δίκαιος* of the coins is represented by the term *Dhamika*, or rather *Dhramika*, from धृ, 'to hold, to maintain,' whence धर्म्म, 'virtue,' etc.

4. The term *νίκηφόρος* appears under the optional forms of *Jayadhara* and *Jayata*, the derivation of which, from जि, 'to conquer,' जय, 'conquest,' is sufficiently obvious.

5. The counterpart of *ἀνίκητος* appears in parallel accord as *apaḍiháta*,[1] for अप्रतिहत, 'unrepulsed' (from हन, 'to strike or hurt').

6. *Mahata* and *Mahataka*, of obvious derivation, occur as the representatives of the Greek *μεγας*.

7. The title *Pradicha*, otherwise *Praticha*, which stands as the indigenous representative of the Greek *ἐπιφανής*, may readily be identified as the vernacular form of प्रतिष्ठित *Pratishṭhita*, 'renowned.'

8. The transcripts of the Greek *σατράπης* and *στρατηγός* seem sufficiently assured, as likewise does the translation of 'ΑΔΕΛΦΙΔΕΙΙΙΣ' in the local *Brada-putrasa*, 'brother's son.'

## III.—THE EPOCHAL AND TERRITORIAL DISTRIBUTION OF THE BACTRIAN MONARCHY.

I have already intimated that I am not in a position, either as regards preparation or present opportunity, to review, with the deliberation the subject demands, the classification of the long list of Bactrian kings, the sole witnesses of whose rule, in the majority of cases, exist in the emanations from their mints

[1] [On Gondophares' coins, *apratihata*.]

exhumed from time to time in and around the ancient seats of government.

In other cases credit is claimed for coins under their faculty of illustrating written history: in this instance they comprehend the sole data for history itself; at least, from their records alone must be drawn, with scant exception, all testimony at present available of the survival, re-institution, and extinction of the dominant Hellenic element on the site of Alexander's furthest conquest in the East. In the almost total absence of annals, whether Occidental or Oriental, it is from the legends stamped upon the public money that we must reconstruct the story of the otherwise unrecorded potentates who swayed the destinies of these lands for upwards of two centuries.

For such tales as these medallic memorials may tell, I must refer to the works of those authors who from time to time have treated this section of numismatics in detail; contenting myself, for the present, with reproducing, with but scant comment, the matured results arrived at by each.[1]

[1] [*Independent Works.*—'Historia regni Græcorum Bactriani, in qua simul Græcarum in India coloniarum vetus memoria explicatur, auctore Theophil. Sigefr. Bayero,' Petropoli, 1738. Mionnet, 'Supplément,' vol. viii. (1837). Lassen, 'Zur Geschichte der Griechischen und Indoskythischen Könige,' Bonn, 1838. 'Coins of Greek, Parthian, and Indo-Scythian Kings of Bactria and the countries on the Indus,' by Dr. C. Grotefend, Hanover, 1840. 'Ariana Antiqua: a descriptive account of the Antiquities and Coins of Afghanistan (with a memoir on the buildings called Topes,' by C. Masson), H. H. Wilson, London, 1841. 'Historical Results, deducible from recent discoveries in Afghanistan,' by H. T. Prinsep, Esq., London, 1844. 'Indische Alterthumskunde,' von Ch. Lassen, Bonn, 1847.

*Calcutta Asiatic Researches.*—'Description of select coins from originals or drawings in the possession of the Asiatic Society,' by H. H. Wilson, Esq., vol. xvii., p. 559 (1832).

*Journal of the Asiatic Society of Bengal.*—'Note on Capt. Hay's Bamian Coins,' by H. Torrens, Esq., vol. ix., p. 70. 'Points in the history of the Greek and Indo-Scythian Kings in Bactria, Cabul, and India, as illustrated by decyphering the ancient legends on their coins,' by Christian Lassen, Bonn, 1838, vol. ix., p. 251; continued, pp. 339, 449, 627, 733. 'Notice of some counterfeit Bactrian Coins,' by Captain Alexander Cunningham, vol. ix., p. 393. 'Notes on Captain Hay's Bactrian Coins,' by Capt. A. Cunningham, vol. ix., p. 531. 'Description of, and deductions from, a consideration of some new Bactrian Coins,' by Capt. A. Cunningham, vol. ix., p. 867; note to ditto, p. 1008. 'Second notice of some forged coins of the Bactrians and Indo-Scythians,' by Capt. A. Cunningham, vol. ix., p. 1217. 'A sketch of the second Silver Plate found at Badakshán,' by Capt. A. Cunningham, vol. x., p. 570. 'Second notice of some new Bactrian Coins,' by Capt. A. Cunningham, vol. xi., p.

No. 1.

GREEK DYNASTIES.—GENERAL LIST.

PROF. H. H. WILSON.

| | B.C. | | B.C. |
|---|---|---|---|
| Theodotus I. | 256 | Philoxenes | 130 |
| Theodotus II. | 240 | Antialkides | 135 |
| Euthydemus | 220—190 | Archebius | 125—120 |
| Demetrius | 190 | Menander | 126 |
| Eukratides | 181 | Apollodotus | 110 |
| Heliokles | 147 | Diomedes | 100 |
| Lysias | 147 | Hermæus | 98 |
| Amyntas | 135 | Agathokles | 135 |
| Agathokleia | | Pantaleon | 120 |
| Antimachus | 140 | | |

BARBARIC KINGS.

SU-HERMÆUS, KADAPHES, KADPHISES.

| | | | |
|---|---|---|---|
| Mayes | 100 | Azilises | 60 |
| Palirisus | 80 | Azes | 50 |
| Spalyrius | 75 | ΣΩΤΗΡ ΜΕΓΑΣ, *King of Kings* | |

130. 'On the Gem and Coins figured in the preceding plate,' by H. Torrens, Esq., B.C.S., vol. xi., p. 137. 'Coins of the Indo-Scythian Princes of Cabul (translations of some uncertain Greek legends),' by H. Torrens, Esq., B.C.S., vol. xx., p. 137. 'Coins of Indian Buddhist Satraps, with Greek inscriptions,' by Major A. Cunningham, vol. xxiii., p. 379.

*Transactions of the Royal Asiatic Society of Great Britain and Ireland.*—'An account of Greek, Parthian, and Hindu medals, found in India,' by Major James Tod, vol. i., p. 313.

*Journal of the Royal Asiatic Society.*—'Observations on some ancient Indian Coins in the cabinet of the Royal Asiatic Society,' by Prof. H. H. Wilson, vol. iii., p. 381.

*Journal Bombay Branch of the Royal Asiatic Society.*—'Observations on the Bactrian and Mithraic Coins, in the cabinet of the Bombay Branch of the Royal Asiatic Society,' by James Bird, Esq., vol. i., p. 293.

*Journal des Savants.*—M. Raoul Rochette, A.D. 1834, pp. 328, 385. Supplément, 1835, pp. 514, 577; note, 640, (Dr. Honigberger's coins). 2me Supplément, A.D. 1836, February; Allard's (*i.e.* Ventura's) collection. 3éme Supplément, A.D. 1838, p. 736; M. Court's collection; ditto, A.D. 1839, p. 89, ditto.

*Journal Asiatique.*—M. E. Jacquet, Feb. 1836, 3éme série, vol. i., p. 122; Sept. 1836, vol. ii., p. 234; Nov. 1837, vol. iv., p. 401; Feb. 1838, vol. v., p. 163; May, 1839, vol. vii., p. 385.

*Revue Numismatique, Blois.*—'Collection Numismatique du Général Court: Rois de la Bactriane,' par Ad. de Longperier, p. 81 (1839).

*Numismatic Journal* (London).—'Græco-Bactrian Coins,' by Professor Wilson, vol. i., p. 144 (1837). 'Proceedings of the Numismatic Society' (London). 'Memoir, by Professor Wilson, on the recently discovered Græco-Bactrian Coins, 14th Dec., 1837.

*Numismatic Chronicle.*—Major Cunningham, 'Monograms, etc.,' vol. viii., p. 175. W. C. W. Vaux, Esq., on Bactrian Coins, vol. xvi., p. 108.]

INDO-PARTHIAN DYNASTY.

| | |
|---|---|
| Vonones . . . . . | Kodes . . . . . |
| Undopherres . . . . . | Miscellaneous Arsacidan |
| Gondophares . . . . . | Kings . . . . . |
| Abagasus . . . . . | |

INDO-SCYTHIAN PRINCES OF KABUL.

| | |
|---|---|
| Kadphises . . . . . | Ooerki . . . . . |
| Kanerki . . . . . | Baraoro . . . . . |
| Kenorano . . . . . | Sassanians . . . . . |

CONTEMPORARY CLASSIFICATION.

Euthydemus.

| | | | | |
|---|---|---|---|---|
| Demetrius . . . | Eukratides. | | | |
| Lysias . . . . . | Heliokles. | | | |
| Amyntas . . . . | Antialkides . . | Antimachus . . . . . | | Agathokles |
| Agathokleia . . . | Archebius . . . | Philoxenes . . | Menander . . | Pantaleon |
| | | | Apollodotus | |
| | | | Diomedes | |
| | | | Hermæus | |
| | | | Su-Hermæus (?) | |

'Ariana Antiqua,' p. 267 (1841).

No. 2.

M. DE BARTHOLOMÆI'S LIST.

1. Défection de la Bactriane et commencement du règne de Diodote, vers 256 av. J. C.
2. Agathoclès succède à son père, vers 240 av. J. C.
   Euthydème s'empare du trône de la Bactriane par le meurtre d'Agathoclès 215 av. J. C.
4. Pantaléon se maintient dans le Kaboulistan oriental contre Euthydème jusque, vers 214 av. J. C.
5. Guerre d'Euthydème avec Antiochus après 210 av. J. C.
6. Traité de paix, conclu avec le Roi de Syrie, vers 206 av. J. C.
7. Euthydème fait des conquêtes dans l'Ariane et l'Arachosie, vers 200 av. J.C.
8. Demétrius fils d'Euthydème succède à son père, vers 190 J. C.
9. Eucratides s'empare de la royauté dans la Bactriane, Demétrius fonde une monarchie dans l'Arachosie et dans les contrées de l'Inde qui avaient été conquises par son père vers 181 av. J. C.
10. Eucratides fait pendant plusieures années la guerre à Demétrius et finit par s'emparer de ses états, vers 164 av. J. C.
11. Eucratides étend ses conquêtes dans l'Inde, vers 160 av. J. C.
12. Meurtre d'Eucratide, par son fils Heliocles, qui s'empare de la couronne en Bactrianne, vers 155 av. J. C.
    Ici commence le démembrement graduel de la monarchie, et les données historiques semblent nous manquer pour tenter même un ordre chronologique quelconque.
13. Antimachus fonde un royaume dans la Drangiane ?
14. Antialcides réunit sous sa domination l'Arachosie et la Kaboulistan oriental.

15. Ménandre fonde un puissant royaume dans l'Inde.
16. Arsace VI., Mitridate Ier roi Parthe, envahit la Drangiane, vers 145 av. J. C.
17. Chûte complète de la Monarchie grecque-bactrienne, proprement dite, vers 139 av. J. C. 'Köhnes Zeitschrift,' 1843, p. 76.

The subjoined list has been abstracted from Major Cunningham's lithographed table inserted in the eighth volume of the 'Numismatic Chronicle,' 1843. It will be found to enter into an elaborate detail of the epochal and territorial distribution of the various divisions of the Bactrian empire. The assignment of the geographical boundaries is understood to have been primarily based upon the author's interpretations of the mint monograms discovered on the coins of the different kings. It is needless to add that these results must be received with considerable caution, as most of my readers will appreciate the ordinary difficulties environing the resolution of monogrammatic combinations, as well as the obstacles that exist to the application of the preferable readings under even a well-defined system of comparative geography, a department in which we are sadly deficient in regard to the countries in question.

No. 3.

MAJOR CUNNINGHAM'S TABLE.

| NO. | B.C. | | |
|---|---|---|---|
| 1 | 256 | Diodotus I. | Bactriana (including Sogdiana, Bactria, and Margiana). |
| | 243 | Diodotus II. | |
| 2 | 247 | Agathocles | Paropamisadæ and Nysa. |
| 3 | 227 | Pantaleon | |
| 4 | 220 | Euthydemus—Bactriana, Ariana (including Aria, Drangia, Arachosia, and Paropamisadæ), Nysa, and subsequently Gandharitis, Peukelaotis, and Taxila. | |
| 5 | 196 | Demetrius—ditto, ditto; and, later in his reign, Patalene, Syrastrene, Larice | |
| 6 | 190 | Heliocles—Bactriana and Paropamisadæ. | |
| 7 | 190 | Antimachus Theos—Nysa, Gand., Peuk., and Taxila. | |
| 8 | 185 | Eucratides—Bactriana, Ariana, besides Patalene, Syrastrene, and Larice, as well as Nysa, Gand., Peuk., and Taxila. | |
| 9 | 173 | Antimachus Nikephoros—Nysa, Gand., Peuk., and Taxila, contemporarily with Eucratides' retention of the rest of his dominions. | |
| 10 | 165 | Philoxenes—succeeds to Antimachus Nikephoros' kingdom | |
| 11 | | Nicias—ditto, with the exception of Taxila. | |
| 12 | 165 | Apollodotus succeeds Eucratides in Ariana, as well as Pata., Syr., Lar. | |
| 13 | | Zoïlus | follow Apollodotus in Ariana alone. |
| 14 | | Diomedes | |
| 15 | | Dionysius | |
| 16 | 159 | Lysias—succeeds these in Paropamisadæ, and obtains Nicias' dominion of Nysa, Gand., and Peuk.; while Mithridates I. possesses himself of Ariana, having previously gained Margiana from Eucratides. | |

| NO. | B.C. | |
|---|---|---|
| 17 | 150 | Antialcidas—succeeds to Lysias' kingdom. |
| 18 | | Amyntas } follow Antialcidas. |
| 19 | | Archebius } |
| 20 | 161-140 | Menander—reigns in Paropamisadæ, Nysa, Gand., Peuk., Taxila, Por. Reg., Cath., Patalene, Syr., Lar. |
| 21 | 135 | Strato—succeeds, with the exception of the countries of Pata., Syr., Lar., which fall to Mauas. |
| 22 | | Hippostratus } follow Strato, |
| 23 | | Telephus } |
| 24 | 126 | Hermæus—rules over Parop., Nysa, Gand., Peuk. (The Su-Sakas obtain Aria, Drangia, and Arach., from the Parthians). |
| 25 | | Mauas—has Taxila, Por. Reg., Cath., Pata., Syr., Lar. |
| 26 | 105 | Kadphises—(*Yuchi*)—takes possession of Hermæus' kingdom, and Taxila from Mauas (Kozola Kadaphes). |
| 27 | | Vonones } |
| 28 | | Spalygis } Paropamisadæ. |
| 29 | | Spalirises } |
| 30 | 110 | Azas—succeeds Mauas, obtaining also, in 90 B.C., Nysa, Gand., and Peuk. |
| 31 | 80 | Azilisas—succeeds Azas in the three latter, adding Taxila, and the Paropamisadæ. |
| 32 | 80 | The Soter Megas obtains the dominions of Azas, and subsequently those of Azilisas. |
| | 60 | The Yuchi again possess Parop., Nysa, and Tax., etc. |
| 33 | 26 | Gondophares—reigns in Ariana. |
| 34 | | Abdagases (and Sinnakes or Adinnigaus)—ditto in ditto, less the Parop. |
| | A.D. | |
| 35 | 44 | Arsaces (Ornospades or Orthomasdes)—ditto, ditto. |
| 36 | 107 | Pakores Monnesses—ditto, ditto (Hiâtheleh in Bactriana. [36a Orthagnes.] |
| | 207 | Artemon—in Aria, Drangia, Arachosia. |
| | | Sassanians. |

'Numismatic Chronicle,' vol. viii., p. 175 (1843).

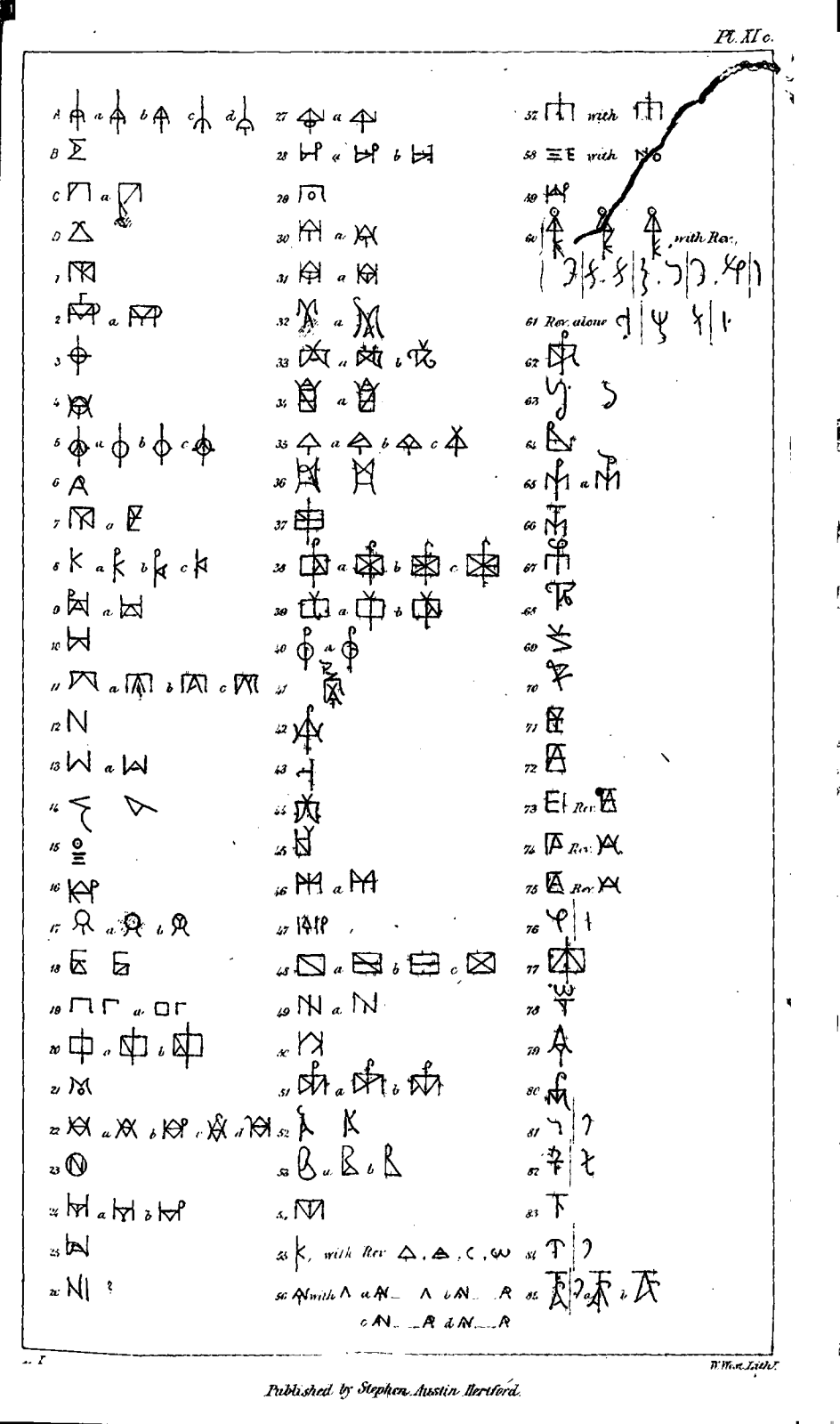
No. 4.

## M. LASSEN'S LIST.

### DIE GRIECHISCH-BAKTRISCHEN UND GRIECHISCH-INDISCHEN KÖNIGE.

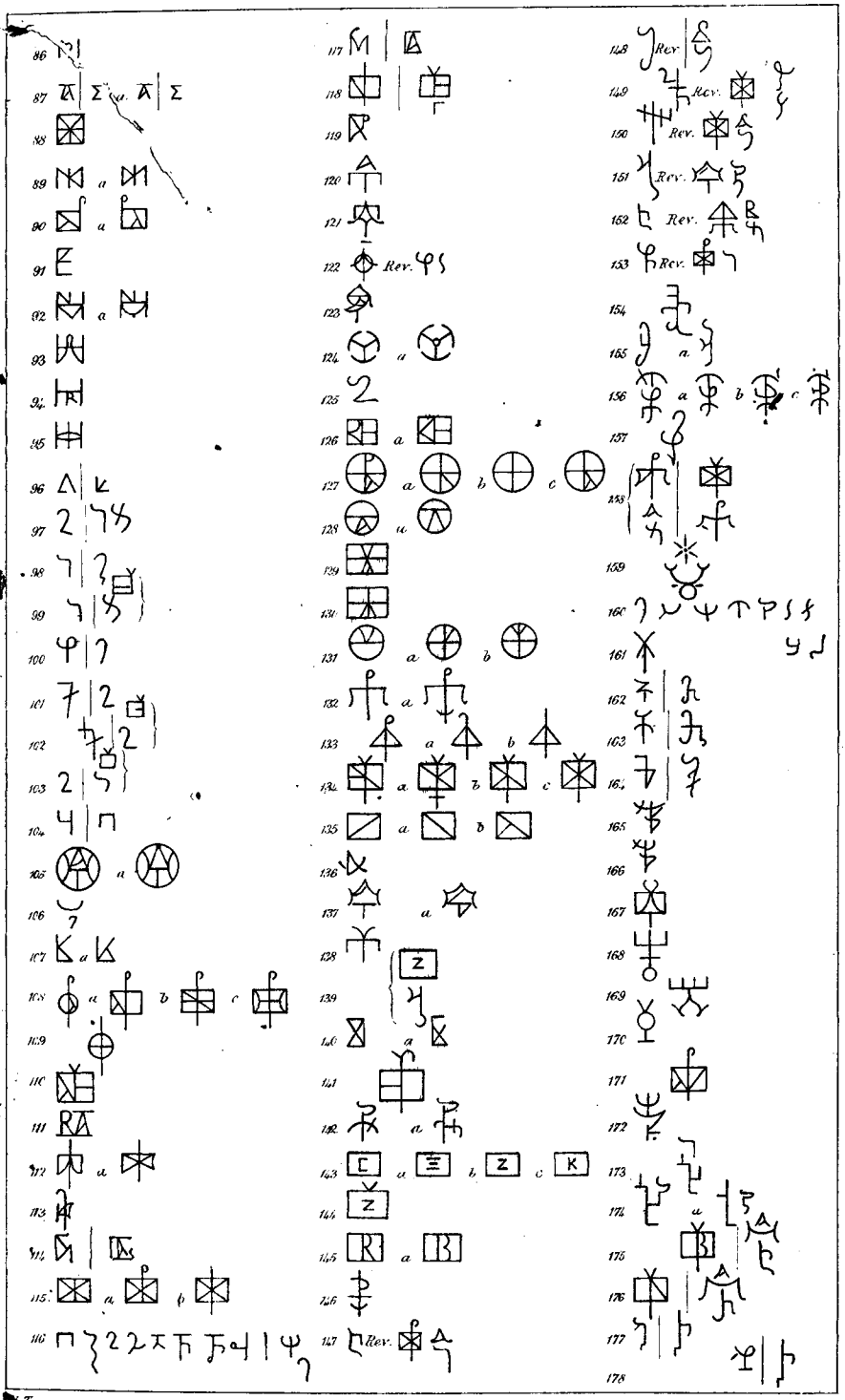
#### 1. DIE GRIECHISCH-BAKTRISCHEN.

Diodotus I., vor 250 vor Chr. G.
Diodotus II., seit 237 . . . . . Agathokles, in Badakshan und am obern Indus seit 245.
Euthydemos, unabhängig seit 245;
in Baktrien seit . . . . 222; Pantaleon.
Demetrios, seit 205; beseigt um 165.
Eukratides, nach 180.
Heliokles, seit 160; Lysias, nach 165; Antimachus, seit 170.
Archebios, 150-140; Antialkides; . Philoxenes, um 160.
Amyntas.





Published by Stephen Austin Hertford.





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2. Die Griechisch-Indischen Könige.

Apollodotos, nach 160.
Zoïlos und Dionysios.
Menandros, seit 144.
Straton, um 124.
Hippostratos, nach 114.
Diomedes, Nikias, Telephos, zwischen 114 u. 100.
Hermaios, 100—85.

No. 5.

Die Indoskythischen und Parthischen Könige.

1. Çaka-Könige.

Mayes, nach 120 vor Chr G.
Azilises, um 100.
Azes, seit 95.
Spalirisos, um 60.
Venones, kurz vor u. nach Chr. G.
Spalygis.
Yndopherres, um. 90.
Abdagases, von 40 bis 30.

2. Jubitchi-Könige.

Kadphises I., nach 85 vor Chr. G.
Kadaphes, und seine namenlosen Nachfolger etwa bis 60 v. Chr. G.
Kadphises II., seit 24 vor Chr. G., bis etwa 1.

3. Turushka-Könige.

Hushka oder Oerki, von etwa 10 vor bis 5 nach Chr. G.
Gushka, bis 10 nach Chr. G.
Kanishka, oder Kanerki, bis 40.
Balan, bis 45.
Oer Kenorano, bis 60.

'Indische Alterthumskunde,' vol. ii., p. xxiv., published 1852.

IV.—As I am compelled to avoid entering upon any such comprehensive revision of the general subject as should justify my attempting to recast the order of succession of the Greek princes of Bactria and Northern India, it becomes necessary that I should adopt, for the moment, some one of the lists above quoted, to serve as a basis for the arrangement of the annexed catalogue. I have therefore selected for the purpose that of Major Cunningham, as being more full in names, more facile of reference, and as grounded upon an examination of by far the most ample series of original specimens.

This outline, it will be seen, was published many years ago, and I have no doubt its author would now be prepared to subject it to extensive modifications. I shall perhaps be pardoned, therefore, for anticipating some of the more obviously needed emendations. In regard to the tables of monograms which accompany this catalogue (pls. xi.*c* and xi.*d*), it may be necessary to explain that a degree of difficulty has been experienced in the allocation of the several varieties of these enigmatical compounds. Some examples, that depart but slightly from combinations previously entered, have been inserted in

the plates independently in their modified form, in order to avoid the risk of the omission of what might eventually prove to be a separate symbol. And, further, some few monograms have been intentionally repeated, with a view to bring more distinctly together the complete group pertaining to a given monarch.

The perpendicular lines dividing the associate ciphers (60 *et seq.*) are inserted to mark the position in the field of the piece, in reference to the main device, occupied by each.

## I. DIODOTUS.

1.—Gold.

OBVERSE:—Head of the king, with fillet, to the right.

REVERSE:—Erect figure of Jupiter, in the act of hurling the thunderbolt; Ægis on the left arm; eagle in front of the left leg; a chaplet in the field; no monogram.

LEGEND:—ΒΑΣΙΛΕΩΣ ΔΙΟΔΟΤΟΥ.

R. Rochette, 'Jour. des Sav.;' 'Bibliothèque Impériale,' Captain Hay. (This last most perfect coin has, in addition to the other symbols, a spear head in the field under the left arm); 'Ariana Antiqua,' p. 218; 'Trésor de Numismatique,' pl. lxxii, 4.[1]

Tetradrachma. Similar types (Cunningham, 'Numismatic Chronicle,' vol. viii., p. 178, and unpublished plates).

Monogram, No. 1, with I. The chaplet is omitted.

)—Drachma. Similar types.

M. de Bartholomæi, 'Köhnes Zeitschrift,' 1843, p. 75, pl. fig. 1. Monogram, No. 2, with C.*a*; chaplet, etc.

Mr. Stokes' and British Museum Coins, Monograms indistinct.

Major Cunningham further cites in his table the Monogram No. 2[a] from the Coins of Diodotus ('Num. Chron.,' vol. viii., p. 179).

## II. AGATHOCLES.

1.—Tetradrachma (weight, 4 drachmes 14 grains Fr.)

OBVERSE:—Head, with fillet, to the right. ΔΙΟΛΟΤΟΥ ΣΩΤΗΡΟΣ.

REVERSE:—Erect figure of Jupiter, as in Diodotus' coins.

LEGEND:—ΒΑΣΙΛΕΥΟΝΤΟΣ ΑΓΑΘΟΚΛΕΟΥΣ ΔΙΚΑΙΟΥ.

Monogram, No. 3 (with chaplet).

M. de Bartholomæi, 'Köhnes Zeitschrift,' 1843, pl. iii., fig. 2, p. 67.

An equally perfect coin of similar types, in the possession of Mr. J. Gibbs, Bombay Civil Service, has the monogram No. 4. The piece in question is stated to weigh 270 grains.

[1] Coins bearing similar devices, from the mint of Antiochus II., may be referred to in pl. ii., fig. 1, p. 25, vol. i. of this work; Burnes's 'Bokhârâ,' pl. iii., fig. 8; 'Ariana Antiqua,' p. 219; 'Trésor de Numismatique,' lxxii., 3.—Monograms: Mr. Gibbs' coin (Tetrad.) A: (see pl. xlii., fig. 1 of this work); 'Bibliothèque Impériale,' B.; Captain Hay (Drachma) C; Mr. Freres' coin (Drachma) C.*a* associated with D.

2.—Tetradrachma. Plate xiii., fig. 3. (These leading numbers refer, in each case, to the plates inserted in this work.)

OBVERSE:—Head of king.

REVERSE:—Jupiter, with the left hand resting on a spear, and the right holding a figure of Diana Lucifera.

LEGEND:—ΒΑΣΙΛΕΩΣ ΑΓΑΘοΚΛΕοΥΣ.

Monogram, No. 5. Mr. Gibbs.

'Ariana Antiqua,' pl. vi., fig. 3; 'Jour. des Sav.,' 1836, pl. ii., fig. 1; 'Trésor de Numismatique,' lxxiv.

a)—Drachma. Similar types.

Monogram, No. 3.

'Jour. des Sav.', June, 1834, pl. fig. 2. 'Grotefend' (1839), p. 29. 'Ariana Antiqua,' pl. vi., fig. 4. 'Bibl. Imp.,' Monogram, No. 5.

3.—Drachma.

OBVERSE:—Head of Bacchus, to the right.

REVERSE:—Panther, to the right, with a bunch of grapes in his fore-paw.

LEGEND:—ΒΑΣΙΛΕΩΣ ΑΓΑΘοΚΛΕοΥΣ.

No Monogram.

'Jour. des Sav.', 1834, pl. fig. 1. 'Ariana Antiqua,' pl. vi., fig. 5. 'Trésor de Numismatique,' lxxiv., 2.

4.—○ Copper. Types as in No. 3, with the exception that the spear which appears doubtfully on the obverse of the former class is here distinct and positive, while, in lieu of the bunch of grapes, a small vine is introduced in front of the panther on the reverse.

Monogram, No. 6. ΑΡαχωσία (?)

'Ariana Antiqua,' pl. vi., fig. 6. 'Num. Jour.', vol. vii., pl. iii., 30.

Mr. G. H. Freeling, Bengal Civil Service, has a cast (in silver) from an apparently genuine original of this coinage, which bears the detached letters ΦΙ in place of a monogram.

5.—□ Copper. Plate xxviii., fig. 9.

OBVERSE:—Panther to the right.

LEGEND.—ΒΑΣΙΛΕΩΣ ΑΓΑΘοΚΛΕοΥΣ.

REVERSE:—Bacchante.

LEGEND, in Indian Pálí, 𐨀 𐨗 𐨟 𐨆 𐨀 𐨀 *Agathuklayesa.*

'Ariana Antiqua,' pl. vi., figs. 7, 8, 9.; and 'Jour. des Sav.,' 1835, pl. i., fig. 1.

Some varieties of these coins display mint marks or letters on the right of the Bacchante. The character is usually formed like a modern Hebrew ב *b*; it may be either an Arian ך *d* or a Pálí ב *ne*; at times, again, it takes the form of an Arian ך *te* or *re*. An analogous piece, in the British Museum, exhibits the Greek letters ΣΗ, on the obverse.

## III. PANTALEON.

1.—⊖ Debased silver (unpublished).

OBVERSE:—Type similar to No. 4. Agathocles.

REVERSE:—Ditto.

LEGEND:—ΒΑΣΙΛΕΩΣ ΠΑΝΤΑΛΕοΝΤοs.

No monogram. Mr. H. Brereton, Bengal Civil Service.

2.—□ Copper. Pl. xxviii. fig. 8. [Types similar to No. 5. Agathocles.]
OBVERSE:—Panther.
LEGEND:—ΒΑΣΙΛΕΩΣ ΠΑΝΤΑΛΕΟΝΤΟΣ.
REVERSE:—Bacchante.
LEGEND, in Indian Pálí, 𐬥𐬀𐬯𐬌𐬭𐬀𐬥𐬀 *Pantalevasa.*
Monogram:—ב, ל, etc. 'Ariana Antiqua,' pl. vi. fig. 11.

## IV. EUTHYDEMUS.

1.—Gold.
OBVERSE:—Head of king to the right, with fillet.
REVERSE:—Hercules seated on a rock, resting his club on a pile of stones.
LEGEND:—ΒΑΣΙΛΕΩΣ ΕΥΘΥΔΗΜΟΥ.
Monogram, No. 7, according to 'Ariana Antiqua,' pl. i., fig. 1.; quoted from Pellerin, 'Additions aux Médailles des Rois,' p. 95. The 'Bibl. Imp.' coin, to my perception, has the monogram copied under No. 7 *a*.

2.—Tetradrachma. Pl. ii., fig. 3.
OBVERSE:—As in No. 1.
REVERSE:—Hercules, etc., with his club resting on his right knee.[1]
Monograms, Nos. 8, 8*a*, A*a*, 9.
'Ariana Antiqua,' pl. i., figs. 2, 3, 4. 'Jour. des Sav.,' 1834, pl. fig. 2; 1835, pl. i., fig. 2.
a)—Drachma, similar types. Capt. Hay. Monogram, 8*a*.

Variant, pl. xiii. fig. 1. Reverse, type as in gold coin. Monogram, No. 10.
'Jour. des Sav.,' 1834, pl. fig. 3; Monogram, No. 11.
Other coins have Monograms, Nos. 12, A*b*, A*c*, A*a*. and A*d*.
'Ariana Antiqua,' pl. xxi. fig. 1, has 12 with A*b*.

a)—Drachma, similar types. 'Ariana Antiqua,' pl. xxi., fig. 2.

3.—Tetradrachma. Pl. xxxi. 3, and pl. xlii., figs. 2, 3.[2]
OBVERSE:—Head of King.
REVERSE:—Hercules standing, to the front; head encircled with a chaplet; on the left arm are the club and lion's skin; right hand extended.
Monogram, No. 5. 'Ariana Antiqua,' pl. i., fig. 11. Monogram 5 *a*.

Variety. Other coins vary the reverse device, inasmuch as the extended right hand holds a second chaplet. British Museum, Monogram, No. 8*a* (weight, 260.4 gr.) Brereton ditto (weight, 258.5 gr.)

a)—Drachma, as No. 3 variety. 'Ariana Antiqua,' pl. i., fig. 12; 'Jour. des Sav.,' 1835, pl. i., fig. 3; British Museum, plated coin, Monogram 5 ?

4.—Didrachma.
OBVERSE:—Laurelled head of Apollo to the left.
REVERSE:—Tripod. R. Rochette, 'Jour. des Sav.,' Dec. 1838, p. 741.

[1] [Where the legends are omitted, they are to be understood to be identical with those cited on the latest occasion.]

[2] [I have had the obverses of the two coins, lately acquired by Messrs. Frere and Brereton, engraved, for the purpose of enabling numismatists to compare the portraiture, as here rendered, with the style of likeness prevailing on classes 1 and 2, an impression existing among our most practised antiquarians that the contrasting dies represent the busts of two independent monarchs, as opposed to the idea of a likeness of one and the same person at different periods of his life.]

5.—◯ Copper. Pl. xxxii., fig. 4.
OBVERSE:—Bearded head, to the right.
REVERSE:—Horse, free. 'Ariana Antiqua,' pl. i., figs. 13, 14, 15.

6.—⊙ Copper (small).
OBVERSE:—Head indistinct.
REVERSE:—Erect figure of Apollo to the left, with arrow in the right and bow in the left hand. 'Ariana Antiqua,' pl. ii., fig. 1.

7.—⊙ Copper.
OBVERSE:—Head as in No. 4.
REVERSE:—Tripod.
Monogram, No. 5*a*. Captain Hay; 'Trésor de Numismatique,' lxxii. 11; also 'Köhler,' pl. i. 3.[1]

## V. DEMETRIUS.

1.—Tetradrachma. Head of king with fillet, to the right.
REVERSE:—Minerva armed, to the front.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ.
Monogram, No. 13, with the letter Δ above the figure.
'Jour. des Sav.,' 1835 (Hönigberger's coin), vol. i., p. 4, 1835; re-engraved in 'Ariana Antiqua,' pl. ii., fig. 3. 'Trés. de Num.,' lxxii. 14.

2.—Tetradrachma.
OBVERSE:—Head of king, to the right, with helmet fashioned like an elephant's head.
REVERSE:—Hercules, like No. 3, Euthydemus' device, but his right hand is upraised in the act of placing the chaplet on his brow.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ.
Mr. Gibbs' coin, monogram, No. 5. 'Köhler,' p. 321.
Monogram, No. 8*a*. R. Rochette, 'Jour. des. Sav.', 1838, p. 743.
B.M. coins, monograms, Nos. 5 (weight, 263·5 grs.), 8*a*, and 14 (inferior execution, weight, 236 grs.)

*a*)—Oboli. Plate xiii., fig. 2. Similar devices. 'Ariana Antiqua,' pl. ii., fig. 5. Monogram, 5. M. Raoul-Rochette notices a Triobolus of this type, 'Jour. des Sav.', Deux. Supp. 16. 'Trésor Numismatique,' p. 149. Other monograms, 5*b*, 6, and 8*a*.

*b*)—No. 4, pl. ii., 'Ariana Antiqua,' has the neck of the king bare.
A second unpublished coin E. I. H. has the monogram No. 15 (ΟΞ).

3.—◯ Copper.
OBVERSE:—Head of Hercules.
REVERSE:—Apollo (?)
Monogram, No. 15. 'Ariana Antiqua,' pl. xxi., fig. 3.

[1] [I have not been able to obtain a sight of Köhler's work; I quote his coins from Grotefend, 'Die Münzen der Könige von Baetrien,' 1839. The original seems to have appeared under the following title: 'Köhler, Médailles grecques de Rois de la Baetriane, du Bosphore,' etc. Petersbourg, 1822, 8vo. 'Supplément à la suite des Méd. des Rois de la Bactriane,' *ibid*, 1823.]

4.—Copper.
OBVERSE as No. 3.
REVERSE:—Hercules; the right arm is upraised towards the head of the figure.
Cunningham, 'Jour. As. Soc. Beng.', vol. xi., pl. fig. 1.

5.—⊙ Copper.
OBVERSE:—Elephant's head.
REVERSE:—The Caduceus.
'Jour. As. Soc. Beng.', vol. ix., p. 69; and vol. xi., pl. fig. 2.

## VI. HELIOCLES.

1.—Tetradrachma.
OBVERSE:—Head of king to the right.
REVERSE:—Jove, standing to the front, with spear and thunderbolt.
LEGEND:—BAΣIΛEΩΣ ΔIKAIOY HΛIOKΛEOYΣ.
Grotefend, p. 30, quoting 'Catalogue d'Ennery,' p. 40.[1]
'Trésor de Numismatique,' lxxiii., 15.
Monogram, No. 16. 'Ariana Antiqua,' pl. ii., fig. 6,
British Museum coins, monograms, Nos. 11*a*, B (weight of piece, 259·6 grs.)
Mr. Gibbs' coin, monogram 17. Mr. Brereton, ditto. Lady Sale, No. 16.
A cast in the possession of Mr. Freeling has the letters ⊓⊓ (No. 19) below the word ΔIKAIOY on the reverse.

a).—Drachma. similar types. 'Bibl. Imp.' Monogram, 11*b*.

2.—Tetradrachma.
OBVERSE:—Helmeted head.
REVERSE:—Jupiter seated: the right hand holding a small figure of victory, the left resting on a spear.
LEGEND:—βAΣIΛEΩΣ ΔIKAIOY HΛIOKΛEουΣ.
Capt. Hay.

3.—⊙ Plated copper (Drachma ?).
OBVERSE:—Helmeted head, closely resembling that of Eukratides, within a marginal border of alternate drops and beads.
REVERSE:—Jove seated.
LEGEND (blundered):—BAΣIΛEΩΣ ΔIKAIOY IΛIOKΛEOYΣ.
Mr. E. C. Bayley; also, Capt. Hay.

a)—Drachma. Similar types.
Monogram Ω. Capt. Hay.

4.—Hemidrachma.
OBVERSE:—Head of king.
LEGEND:—BAΣIΛEΩΣ ΔIKAIOY HΛIOKΛEOYΣ.
REVERSE:—Jove, as above, No. 1.
LEGEND, in Bactrian-Pálí or Arian characters, *Máhárajasa Dhramikasa Heliyakreyasa.*
'Ariana Antiqua,' pl. xxi., fig. 8. Monogram Σ.
The orthography of the name in the Arian varies at times to *Heliyakresasa* and *Eliyakreyasa;* the former occurs on a coin in the E. I. H., with the monogram No. 8*a*. Other hemidrachmas have monograms No. 20 and 20 with Σ.

[1] ['Catalogue des Médailles du Cabinet,' de M. d'Ennery. Paris, 1788.]

5.—□ Copper. Pl. xliii., fig. 7.
OBVERSE:—Head.
REVERSE:—Elephant to the left.[1]
'Ariana Antiqua,' pl. ii., fig. 7, monogram Σ. Other monograms Nos. 8*a*. E. I. C. coin, 21. Mr. Frere, monogram No. 22.
These coins also differ occasionally in the expression of the Arian version of the name, exhibiting it as *Heliyakreyasa* and *Heliyakraasa*.

6.—□ Copper. Plate xliii., fig. 8. As No. 5, but the elephant on the reverse is to the right.

7.—□ Copper.
OBVERSE:—Elephant, to the right.
REVERSE:—Bull. Capt. Hay.[2]

8.—Copper. Plate xxviii., fig. 4. Degraded type.
OBVERSE:—Head.
REVERSE:—Figure as in No. 1. Legends corrupt and imperfect.

9.—Copper. Plate xv., figs. 12, 13, 14. Degraded type.
OBVERSE:—Head.
REVERSE:—Horse, free, to the left. Legends corrupt and imperfect.

## VII. ANTIMACHUS ΘΕΟΣ.

1.—Tetradrachma.[3] (Cast.)
OBVERSE:—Head with fillet.
LEGEND:—ΔΙΟΔΟΤΟΥ ΣΩΤΗΡΟΣ.
REVERSE:—Standing figure of Jupiter, as in the gold coinage of Diodotus
LEGEND:—ΒΑΣΙΛΕΥΟΝΤΟΣ ΑΝΤΙΜΑΧΟΥ ΘΕΟΥ.'
Monogram, No. 12.
Capt. Hay. Mr. Brereton has a similar forgery with the same monogram.

2.—Tetradrachma.
OBVERSE:—Head of king, to the right, with Causia.
REVERSE:—Neptune, to the front, with trident and palm-branch.
LEGEND:—ΒΑΣΙΛΕΩΣ ΘΕΟΥ ΑΝΤΙΜΑΧΟΥ.
'Köhler,' i. 10, reproduced by 'Mionnet,' sup. viii. 466.
Monogram, No. 23. British Museum coins, monogram No. 8*a* and 23. Lady Sale and Mr. Brereton, also No. 23.

*a*)—Drachma. British Museum, monogram No. 23.

[1] [The Arian legends, like the Greek, are ordinarily omitted after one insertion; where not otherwise noted, therefore, the succeeding coins are to be understood to bear similar epigraphs.]

[2] [I am indebted to Mr. E. C. Bayley, of the Bengal Civil Service, for most of these notices of Captain W. E. Hay's coins. I myself have seen only the silver pieces of that officer's valuable collection.]

[3] [It is needless to say that this important piece, which, though a cast, is evidently taken from a genuine antique, necessitates the promotion of Antimachus Theos to a close proximity, if not to a contemporaneous existence, with the founder of the Bactrian independence. This coin was not known in England when Art. iii., vol. i., went to press.]

b).—Hemidrachma (31·7 grs.). British Museum coin, monogram No. 9*a*. A second, monogram No. 23.

Major Cunningham ('Jour. As. Soc. Beng.,' vol. ix., p. 872) describes a 'plated' hemidrachma of Antimachus Theos, with the monogram 'Xo.'

c).—Obolus. 'Ariana Antiqua,' pl. xxi., fig. 12. Monogram 8*a*.

## VIII. EUCRATIDES.

1.—Tetradrachma. Pl. xlii., fig. 2.

OBVERSE:—Bare head of the king, with fillet.

REVERSE:—Apollo, bow in the left, and arrow in the right hand.

LEGEND:—ΒΑΣΙΛΕΩΣ ΕΥΚΡΑΤΙΔΟΥ.

'Köhler,' 'Ariana Antiqua,' pl. iii., fig. 4, monogram No. 9*a*.[1]

Lady Sale, same monogram. See also 'Jour. des Sav.,' Sept., 1835, i. 5; 'Mionnet,' sup. viii.; British Museum coins, monograms Nos. 10, 24, 25; 'Bib. Imp.,' No. 26; M. le Duc de Luynes, No. 5*c*.

a)—Drachma. Similar types. Pl. xiii. 6. General Fox, monogram 29.

2.—Obolus. Plate xxxii., fig. 10.

OBVERSE:—Bare head of king.

REVERSE:—Caps and palm-branches of Dioscuri. Same legend as No 1. Monograms, Nos. 3*a*, 13*a*, 27, 28, 28*a*.

3.—Obolus.

OBVERSE:—Helmeted head of king.

REVERSE:—As in No. 2.

'Ariana Antiqua,' pl. iii., fig. 5. Gen. Fox, monogram No. 13*a*. E. I. H., 13*a*, M, and 19*a*. British Museum, monog. 12—*i.e.* N.

4.—Tetradrachma.

OBVERSE:—Bare head of king, to the right, with fillet.

REVERSE:—Dioscuri, charging.

British Museum. Monogram 8*a*.

a)—Drachma. Pl. xiii., fig. 6. Similar types.

'Jour. des Sav.,' 1836, ii., 3. 'Trés. de Num.,' pl. lxxiii. fig. 2. B.I., monogram 11.

5.—Tetradrachma. Pl. xlii, fig. 4, p. 126. (Weight of E. I. H. coin, with suspending loop, 255·7 grs.)

OBVERSE:—Helmeted head of king.

LEGEND:—ΒΑΣΙΛΕΥΣ ΜΕΓΑΣ ΕΥΚΡΑΤΙΔΗΣ.

REVERSE:—Male and female heads, uncovered and unadorned with fillets.

LEGEND:—ΗΛΙΟΚΛΕΟΥΣ ΚΑΙ ΛΑΟΔΙΚΗΣ.

Monogram, No. 13*a*. 'Jour. As. Soc. Beng.,' vol. vii., pl. xxvii., fig. 1. Re-engraved in 'Ariana Antiqua,' pl. xxi., fig. 7, from the original coin.

Col. Sykes' cast, from a possibly genuine coin of this class, and a second reproduction from the same or a similar original, in the possession of Mr. Brereton, both have the monogram No. 5*c*.

[1] [Where the monogram facsimiles in the plates differ from the published specimens, it must be understood that my copy has been taken anew from the original piece, and does not follow the engraving, cited for the mere illustration of the numismatic classification.]

6.—Tetradrachma. Plate xiii., fig. 5. (Weight of selected specimens in the British Museum, 258 and 259 grains.)
OBVERSE:—Helmeted head, to the right.
REVERSE:—Dioscuri, charging.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.
'Ariana Antiqua,' pl. iii., figs. 1, 2, 3. Monograms 13*a*, 27, 29.
British Museum. Monograms, Nos. 5*c*, 11*c*, 13*a*, 29, 30, 31. Lady Sale, No. 28*a*.
B. I. Monograms, M, 29. Mr. Bayley. Monogram, ☿ with HT in the field.
Capt. Robinson. Monograms 13*a*, 28*a*.
a)—Drachma. 'Jour. des Sav.,' 1834, pl. fig. 5: 1835, pl. i., fig. 6. 'Trés. de Num.,' lxxiii. 6. British Museum, monogram N. B.I. 28*b*. Hay, 5*c*.

7.—Tetradrachma.
OBVERSE:—Helmeted head of the king, to the left, with a portion of the bust displayed; the right arm raised in the act of darting a javelin.
REVERSE:—Dioscuri.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.
Monogram 5*b* (?) 'Köhler,' i. 8. 'Trés de Num.,' pl. lxxiii, fig. 7.

8.—⊖ Copper.
OBVERSE:—Head of Apollo to the right.
REVERSE:—Horse, free, to the left.
LEGEND:—ΒΑΣΙΛΕΩΣ ΕΥΚΡΑΤΙΔΟΥ. 'Ariana Antiqua,' pl. iii., fig. 7.

9.—○ Copper. Pl. xiii., fig. 7, Of similar devices and legends to No. 6.
'Ariana Antiqua,' pl. iii., fig. 8, monogram, No. 21. Mr. Bayley, No. 40.

10.—□ Copper.
OBVERSE:—Helmeted head, to the left, with javelin.
REVERSE:—Dioscuri.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.
'Köhler.' 'Mionnet,' viii. 470. British Museum, monogram 32.

11.—⊖ Copper. Size, 3. British Museum.
OBVERSE:—Helmeted head to the left.
REVERSE:—A single horseman at the charge.

12.—□ Copper. Small coin. Pl. xxxii., fig. 11.
OBVERSE:—Bare head of king to the right.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.
REVERSE:—Caps and palm-leaves of the Dioscuri.
LEGEND IN ARIAN:—*Mâhârajasa Eukrâtidasa.*
'Ariana Antiqua,' pl. iii., fig. 12. 'Trés. de Num.,' lxxiii. 13.

13.—□ Copper. Pl. xiii., figs. 8–10.
OBVERSE:—Helmeted head, as in No. 6.
REVERSE:—Dioscuri.
LEGEND IN ARIAN:—*Mâhârajasa Eukrâtidasa.*
Monograms, 17*a*, 21, 27, 28*a*, 31 with E, 33, 33*a*, 34, 34*a*, 35, 35*b*, 36, 37, 38, 39, 41, 43, 44, 45.
'Ariana Antiqua,' pl. iii., figs. 9, 10. 'Jour. des Sav.,' 1835, pl. i., fig. 7.

14.—□ Copper.

OBVERSE:—Helmeted head to the right.

REVERSE:—Seated figure to the left, with a small elephant at the side (as in Antialkides' coin, No. 1).

LEGEND indistinct. 'Ariana Antiqua,' pl. iii., fig. 11.

15.—□ Copper.

OBVERSE:—Helmeted head of king to the left, with javelin.

REVERSE:—A winged figure of Victory to the right, with chaplet and palm branch.

LEGEND defective. 'Ariana Antiqua,' pl. xxi., fig. 5, monogram 13*a*.

16.—□ Copper.

OBVERSE:—Helmeted head of king to the right.

REVERSE:—Victory to the left, extending a chaplet.

ARIAN LEGEND:—*(Maharajasa) Rajadirajasa Eukratidasa.*

'Ariana Antiqua,' pl. xxi., fig. 6, and British Museum, monogram 40*a*. Mr. Bayley, monogram, 40.

Additional monograms of Eucratides, Nos. 8*c*, 27*a*, 33*b*, 42.

## IX. ANTIMACHUS ΝΙΚΗΦΟΡΟΣ.

1.—Hemidrachma. Plate xv., fig. 3.

OBVERSE:—Winged figure of Victory, to the left, with palm branch in her right, and fillet in her left hand.

LEGEND:—ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟΡΟΥ ΑΝΤΙΜΑΧΟΥ.

REVERSE:—King on horseback, to the right.

ARIAN LEGEND:—*Mahárajasa jayádharasa Antimákhasa.*

'Ariana Antiqua,' pl. ii., fig. 16.

Prof. Wilson was under the impression that all these coins bore the same monograms, Nos. 31*a* ('Ariana Antiqua,' 274); they are now found to include the symbols classed under the following numbers, 27, 31, 46, and 46*a*.

2.—□ Copper. Pl. xv., 4.

OBVERSE:—Demeter, to the front; cornucopia on her left arm. Legend imperfect.

REVERSE:—Winged figure of Victory, to the left.

ARIAN LEGEND:—*Máhárajasa . . . . Antimakhasa.*

'Ariana Antiqua, pl. ii., fig. 16. Monogram Σ

3.—□ Copper.

OBVERSE:—The skin of an animal (?)

LEGEND:—ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟΡΟΥ ΑΝΤΙμαχου.

REVERSE:—Wreath and palm-branch.

ARIAN LEGEND:—*Máhárajasa . . . . Antimakhasa.*

'Ariana Antiqua,' pl. xxi., fig. 14. Monogram 47.

A silver cast of a genuine coin, in the possession of Mr. Bayley, definitely determines the attribution of this piece, contributing the full counterpart names as inserted above. It bears the monogram No. 27.[1]

[1] [See also Cunningham, 'Jour. As. Soc. Beng.,' April, 1840, p. 392.]

## X. PHILOXENES.

1.—Didrachma. Plate xv., fig. 1.

OBVERSE:—Helmeted head of king, to the right.

LEGEND:—BAΣIΛEΩΣ ANIKHTOY ΦIΛOΞENOY.

REVERSE:—Horseman with helmet, as on the obverse of Antimachus Nikephorus' coins.

ARIAN LEGEND:—*Mâhârajasa Apaḍihatasa Pilasinasa.*

'Jour. des. Sav.,' 1836. ii., 5. 'Ariana Antiqua,' pl. ii., fig. 17.

Monogram No. 22*a*.

a)—□ Hemidrachma, of similar devices. Monograms No. 48*a*, with Σ.

Mr. Bayley.

b)—□ Obolus (?). Types and legends as above. The Arian name is written, *Phalasinasa.* Monogram No. 35*c*. Captain Robinson.

Mr. Frere has a silver cast of an apparently authentic didrachma, which supplies us with a variety of this obverse type. The king's head is here uncovered. On the reverse, traces of the monogram 31*a* are visible. The Arian transcript of the name commences with the letter *Phi*.

2.—□ Hemidrachma.

OBVERSE:—Bare head of king with fillet, to the right. Legend as above.

REVERSE:—Device and legend as in No. 1.

Monogram No. 48*a*, with Σ. 'Ariana Antiqua,' pl. xxi., fig. 13.

Colonel Abbott. Monograms, Nos. 22, 8.

3.—□ Copper. Plate iii., figs. 6, 7; plate xv., fig. 2.

OBVERSE:—Demeter, with the ordinary Greek legend.

REVERSE:—Humped bull, with the usual Arian legend; the initial of the name is indifferently expressed by *Pi* or *Phi*.

'Jour. des. Sav.,' 1836, ii., 6. 'Ariana Antiqua,' pl. ii. fig. 18.

Monogram Nos. 48*a*, 48*a* with Σ on reverse, 48, 49, 50. B.I., 51 (?) with a Bactrian ר *r* on reverse. Mr. Brereton. Monograms 22*a*, with an Arian *v* on reverse, 48*a* and 48*b*, with Σ on reverse.

4.—□ Copper.

OBVERSE:—Crowned figure, with a long spear.

LEGEND:—BAΣIΛEΩΣ ANIKHTOY ΦIΛOΞENOY.

REVERSE:—A figure of Victory. Captain Hay.

## X[a]. ARTEMIDORUS.

1.—Hemidrachma.[1]

2.—□ Copper.

OBVERSE:—Erect figure, with the right arm upraised.

LEGEND:—BAΣIΛEΩΣ ANIκητου αρτεMIΔΩΡου.

REVERSE:—Bull, as in Philoxenes' copper coins.

ARIAN LEGEND:—(M)*âhârajasa Apaḍihâta*(*sa* A)*ti*(*midarasa*).

Mr. Bayley.

These legends have been completed from a more perfect coin figured and assigned by Major Cunningham ('Jour. As. Soc. Beng.,' 1854, p. 668).

[1] [Mr. Brereton deposes to the discovery of a coin of this description, which has passed from his own possession to that of Major Cunningham. He is under the impression that the types are—Obverse: King's head. Reverse: Minerva Promachos.]

I conclude that this Artemidorus is the monarch styled Artemon in Major Cunningham's list above cited; but if so, the style and fabric of his coinage must very materially alter his assumed date and position in the general list as determined by that numismatist.

## XI. Nicias.

1.—□ Copper. Plate xlii., fig. 5.
Obverse:—Head of king, to the right.
Legend:—βαΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΝΙΚΙου.
Reverse:—Horseman, as in No. 1, Philoxenes.
Arian Legend:—*Máhárajasa Tradatasa* . . KIASA.
Colonel T. Bush. See also Cunningham, 'Jour. As. Soc. Beng.,' vol. xi., p. 136.

## XII. Apollodotus.

1.—⊙ Hemidrachma. Plate iii., fig. 4; also pl. xiv., fig. 4.
Obverse:—Head of king.
Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΚΑΙ ΦΙΛΟΠΑΤΟΡΟΣ ΑΠΟΛΛΟΔΟΤΟΥ.
Reverse:—Thessalian Minerva to the left.
Arian Legend:—*Máhárajasa Tradatasa Apaladatasa.*[1]
Monograms, Nos. 38*a*, 38*b*, 51, 51*a*, 51*b*, 52, 53.
'Ariana Antiqua,' pl. iv., fig. 13.

2.—□ Hemidrachma. Plate xiv., fig. 5.
Obverse:—Elephant.
Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΑΠΟΛΛΟΔΟΤΟΥ.
Reverse:—Humped bull.
Legend as in No. 1. 'Ariana Antiqua,' pl. iv., fig. 14.
Monograms 22*b*, and the entire suite, together with the combinations indicated under each number, from 54 to 59, both inclusive.

3.—⊙ Hemidrachma. Types and legends as No. 2.
'Ariana Antiqua,' pl. iv., fig. 15.

[1] [The Arian orthography of the name of Apollodotus varies considerably in the different specimens of his extensive mintages. I notice in some instances a dot at the foot of the initial *a*, which elsewhere constitutes the sign of the long sound of that vowel. This is the solitary occasion upon which I have observed its use in defining more precisely the power of the ordinary 𐨀 initial. And, however little, to our ideas, the exact definition of the phonetic elements of the name may require the hard *a* in this place, we can scarcely understand the sign as purporting anything else, especially when we observe the lax method of insertion or omission of the same quantitive mark in other words. The antepenultimate *d* is used indifferently in its simple form, or with the additional horizontal foot stroke, the precise import of which is yet undetermined; and, finally, the *d* occurs in its normal shape, with the dot of a following hard *a*. The penultimate is also subject to modification, usually appearing under the form of the proper 𐨕 = *t*, but at times bearing the foot stroke ordinarily reserved to distinguish the 𐨖 = *d*, of assimilate outline; but to show the irregularities practised in this respect, this extraneous mark is added to the *t* in the name, while on the same coin the special definition is rightly reserved to discriminate the 𐨖 = *d* from the 𐨕 = *t* in Tra*d*a*t*asa. It must be added, however, that in some instances the superfluous foot stroke, in the penultimate of apala*d*a*t*asa takes the form of an equally needless hard *a* medial.]

4.—□ Copper. Small coin.
OBVERSE:—Figure of Apollo, with bow and arrow, to the right.
Legend as in No. 1.
REVERSE:—Tripod. Legend as usual. Monogram, No. 38*a*.
Captain Robinson. Mr. Brereton, monogram 37 (?)

5.—○ Copper. Large coin. Plate xiv., fig. 6.
OBVERSE:—Apollo, with arrow, to the right. Legend as in No. 2.
REVERSE:—Tripod. Legend as in No. 1.
'Ariana Antiqua,' pl. iv., fig. 16. 'Jour. des Sav.,' 1834, pl. fig. 6.

Variant. ○ Copper. Coin of inferior execution. Legends arranged on three sides of a square, instead of in the usual marginal circle.
Bactrian monogram, *gi*, with *d* or *n*.
Cunningham, 'Jour. As. Soc. Beng.,' vol. ix., p. 867.

6.—□ Copper. Similar devices and legends to No. 5.
Monograms 63, 64.

7.—□ Copper. Plate xiv., fig. 7.
OBVERSE:—Apollo to the front, with the bow in the left and the arrow in the right hand. Legend as usual.
REVERSE:—Tripod. Legend as usual. 'Jour. des Sav.,' 1835, i. 7.
Variants. Small coin. Pl. xiv., fig. 8; also 'Ariana Antiqua,' pl. iv. figs. 17, 18, and small coin No. 19.
Monograms Nos. 8, 8*a*, 21, 52*a*, 57, and the entire suite 65—75.

8.—□ Copper. Middle size.
OBVERSE:—'Figure of Apollo standing to the left, clothed in the anaxyris, with chlamys behind, a quiver at his back; an arrow in his right hand, his left resting on his bow; inclosed in a frame of oblong globules, ΒΑΣΙΛΕΩΣ ΒΑ [?] . . . . ΑΠΟΛΛΟΔΟΤΟΥ.'
REVERSE:—'Tripod; in the field, a symbol which seems to be a military ensign.'
Arianian inscription imperfect [*Apaladatasa*].
'Ariana Antiqua,' 291, quoting 'Jour. des Sav.,' Dec. 1838, p. 752.
B. I. Monogram 38*b*. Small coin, 38*a*. Col. Bush. Arian Monogram, No. 76.

9.—□ Copper. Small coin. Plate xlii., fig. 6. Unique.
OBVERSE.—Apollo as in No. 8. Legend altogether wanting.
REVERSE:—Symbol figured in the plate.
ARIAN LEGEND:—*Maharajasa Tradatasa Apaladatasa.* Col. T. Bush.

10.—□ Copper. Small coin.
OBVERSE:—Bull.
REVERSE:—Tripod, surrounded by a bossed margin. No Legends. B.I.

11.—□ Copper (middle size), indifferent execution.
OBVERSE:—Apollo (?) *seated*, to the right, a bow in left hand.
LEGEND:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ . . . . . ΟΔΟΤΟΥ.
REVERSE:—Tripod, within a frame. Legend imperfect, . . . *paladatasa* (?).
Monogram, No. 77. Mr. E. C. Bayley.

## XIII. ZOILUS.

1.—Hemidrachma.

OBVERSE:—Head of king, to the right, with fillet.

LEGEND:—BAΣIΛEΩΣ ΔIKAIoY ZΩIΛoY.

REVERSE:—Hercules, as in Demetrius' coins, but the right hand holding the chaplet is not upraised.

ARIAN LEGEND:—*Mâhârajasa Dhramikasa Jhoilasa.*

Monogram, No. 30.

Lady Headfort, No. 31. Captain Robinson, No. 46. Colonel Abbott, No. 78. Mr. Bayley, No. 79.

2.—Hemidrachma.[1] These coins have a great similitude, in their die execution, to the small Philopator coins of Apollodotus.

OBVERSE:—As No. 1.

LEGEND:—BAΣIΛEΩΣ ΣΩTHPoΣ ZΩIΛoY.

REVERSE:—Thessalian Minerva.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Jhoilasa.* Monogram No. 60. Colonel Abbott. Mr. Bayley, No. 80.

3.—□ Copper.

OBVERSE:—Head of Hercules covered with the lion's skin, to the right.

LEGEND:—BAΣIΛEΩΣ ΔIKAIoY ZΩIΛoY.

REVERSE:—Club, with bow in its case, surrounded by a chaplet.

ARIAN LEGEND:—*Mâhârajasa Dhramikasa Jhoilasa.*

Monogram No. 79. Lady Headfort.

4.—⊙ Copper. Similar types to the Apollodotus coin, No. 5, with the addition of a small elephant at the back of the figure, in the field of the obverse. Legends as in No. 2, but the Greek epigraph is less correctly rendered. Monograms Nos. 81, 82, 83.

5.—◯ Copper (small coin).

OBVERSE:—Elephant, to the right. Epigraph illegible.

REVERSE:—Tripod.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Jhoilasa.*

Arian Monograms, *dhi*, *Bh*, and *a* with *t*. Colonel Bush.

## XIV. DIOMEDES.

1.—□ Copper. Plate XXVIII., fig. 3.

OBVERSE:—Dioscuri standing, to the front.

LEGEND:—BAΣIΛEΩΣ ΣΩTHPoΣ AIoMHΔoY.

REVERSE. ARIAN LEGEND:—*Mâhârajasa Tradatasa Diyamedasa.*

Monograms Nos. 31, 31 with Σ. Mr. Brereton. 48*a* with Σ.

'Ariana Antiqua,' pl. v., fig. 1.

[1] [Major Cunningham has published a degraded type of this class, which he supposes to have formed part of 'a coinage (that) was re-issued and perhaps imitated by the native chiefs in their own names.' 'Jour. As. Soc. Beng.,' (1854) p. 692, and pl. XXXV., fig. 11.]

## XV. Dionysius.

1.—Hemidrachma (of inferior execution, similar in its aspect to the Philopater coins of Apollodotus).

Obverse:—Head with fillet, to the right.

Legend:—BAΣIΛEΩΣ ΣΩTHPoΣ ΔIoNYZIoY.

Reverse:—Thessalian Minerva.

Arian Legend:—*Mâhârajasa Tradatasa Dianisiyasa.*

Monogram (as in Apollodotus' coins), No. 60, standard type. Col. Abbott.

A second specimen gives the Σ in the name more after the form of a proper *sigma*. The outline of the *Ni*, in the Arian legend, is also modified in the duplicate coin, which, however, bears the same monogram.

2.—□ Copper.

Obverse:—Apollo, to the right, as in Apollodotus' coins.

Legend:—BAΣIΛEΩΣ ΣΩTHPoΣ ΔIoNYΣIoY.

Reverse:—Tripod. Arian Legend imperfect.

Monogram No. 84, consisting of Arian letters, *Sh* and *A*. B.I., mon. 85. British Museum. 'Num. Chron.,' xvi., plate p. 108, fig. 5.

3.—□ Copper. Plate xlii., fig. 7. Unique.

Obverse:—As in No. 8, Apollodotus. No legend.

Reverse:—Device, as represented in the plate.

Arian Legend:—*Mâharajasa Tradatasa Diyanisiyasa.*

Colonel Bush.

## XVI. Lysias.

1.—Hemidrachma. Plate xliii., fig. 4.

Obverse:—Head of king, with helmet in the shape of an elephant's head: similar to the Demetrius' type.

Legend:—BAΣIΛEΩΣ ANIKHToY ΛYΣIoY.

Reverse:—Hercules standing, to the front, as in the Demetrius' prototype.

Arian Legend:—*Mâhârajasa Apaḍihâtasa Lysikasa.*

'Ariana Antiqua,' pl. ii., fig. 9. Monogram 86. 'Ariana Antiqua,' pl. xxi., fig. 9. Monogram 87. B.I., monogram 85. Colonel Abbott. Monograms 8*a*, 86, 87.

2.—Hemidrachma.

Obverse:—Head of the king, with the ordinary helmet.

Reverse:—Hercules, as above. The legend varies in the Arian definition of the name, which at times exhibits the initial vowel *a*, and at others the letter *k*, as the penultimate.

The seven specimens of this mintage that I have had an opportunity of examining all have the monogram No. 86. 'Num. Chron.,' xvi., plate p. 108, fig. 1.

3.—□ Copper. Plate xiv., fig. 12.

Obverse:—Bust of king, to the right, head uncovered, with a club resting on the shoulder.

Reverse:—Elephant, to the right, as in Heliocles' coins. Legend as above, the name being usually spelt with a *k*.

'Ariana Antiqua,' pl. ii., fig. 10. 'Num. Jour.,' vii., pl. ii., 22.

Monograms Nos. 8*a*, 22, 88*a*.

4.—⊙ Copper.
OBVERSE:—Bust of the king, as in No. 3.
REVERSE:—Elephant, to the right. (*Lisiasa.*)
Monogram No. 24*a*. Colonel Bush.

## LYSIAS AND ANTIALKIDES.

1.—□ Copper.
OBVERSE:—Bare head of king, to the right.
LEGEND:—ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ ΛΥΣΙΟΥ.
REVERSE:—Caps and palm-branches of the Dioscuri.
ARIAN LEGEND:—*Mâhârajasa Jayadharasa* ANTIALIKIDASA.
Captain Hay.

## XVII. ANTIALKIDES.

1.—Tetradrachma.
OBVERSE:—Bare head of king.
LEGEND:—ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟΡΟΥ ΑΝΤΙΑΛΚΙΔΟΥ.
REVERSE:—Jove enthroned, with a small figure of Victory in his right hand; minute elephant in front, etc.
ARIAN LEGEND:—*Mâhârajasa Jayadharasa Antialikidasa.*
Monogram No. 86. Colonel Abbott.

*a*).—Hemidrachma. Similar types. 'Ariana Antiqua,' pl. ii., fig. 12.
Monograms No. 8*b*, 22, 86.

2.—Drachma.
OBVERSE:—Head of king, with Causia.
REVERSE:—As in No. 1.
Monogram No. 31. B.I.

*a*).—Hemidrachma. Plate xxviii., fig. 2.
In some specimens the small elephant faces the seated figure.
Monograms Nos. 8*b*, 22, 31, 86. 'Ariana Antiqua,' pl. ii., fig. 11.

3.—Hemidrachma.
OBVERSE:—Head, with the ordinary crested helmet.
REVERSE:—Device as usual.
Monograms 8*b*, 86. 'Ariana Antiqua,' No. 3, p. 277.

4.—◯ Copper.
OBVERSE:—Bust, with uncovered head. The right hand grasps the thunderbolt.[1]
REVERSE:—Caps and palms of the Dioscuri.
Monograms 8, 31, 86, 87. 'Ariana Antiqua,' No 6, p. 279.

5.—□ Copper. Plate xiv., figs. 9, 10, 11.
Similar devices.
These two classes of coins vary occasionally in the subordinate typical details,[2] and the Arian definition of the name is irregular in the general series, in the interchange of the dental and cerebral *d*, as the penultimate consonant. Monograms, Nos. 8*a*, 22, 30 (?), 49*a*, 87, 87*a*.

[1] [Major Cunningham supposes this to be the head of 'Jupiter Nicephorus.' 'Jour. As. Soc. Beng.,' vol. ix., p. 874.]
[2] [*Ex. Gr.*, 'Num. Chron.,' vii., pl. ii., fig. 21.]

## XVIII. AMYNTAS.

1.—Didrachma. Much damaged. (Weight, 128 grs.)
OBVERSE:—Helmeted head, to the right.
LEGEND:—BAΣIΛEΩΣ NIKATOPOΣ AMYNTOY.
REVERSE:—Thessalian Minerva, to the left.
ARIAN LEGEND:—*Mâhârajasa Jayadharasa Amitasa.*
British Museum. Monogram No. 20*a*.
'Num. Chron.,' xvi., plate p. 108, fig. 2.

2.—□ Copper. Plate xxxii., fig. 1.
OBVERSE:—Head of king, to the right.
REVERSE:—Minerva armed, to the left.
Monogram No. 88. 'Ariana Antiqua,' pl. ii., fig. 14.

## XIX. ARCHEBIUS.

1.—Tetradrachma.
OBVERSE:—Bare head.
LEGEND:—BAΣIΛEΩΣ ΔIKAIOY NIKHΦOPOY APXEBIOY.
REVERSE:—Jupiter standing to the front, with spear and thunderbolt.
ARIAN LEGEND:—*Mâhârajasa Dhramikasa Jayadharasa Arkhabiyasa.*
Monogram No. 89. Colonel Abbott.[1]

*a*).—Hemidrachma. Plate xxviii., fig. 1.
Similar types and legends.
'Ariana Antiqua,' pl. ii., fig. 8. Monogram No. 8*b*.

2.—Tetradrachma.
OBVERSE:—Helmeted head.
REVERSE:—As No. 1.
Monogram No. 20*a*. Colonel Abbott.

3.—Hemidrachma.
OBVERSE:—Bust of the king with bare head, to the left, a javelin in the right hand, as in one of the common classes of Menander's coins (No. 2.)
REVERSE:—Jove (Neptune?) as above.
Monograms, No. 8*a* with 90. 'Ariana Antiqua,' pl. xxi., fig. 10.

4.—○ Copper.
OBVERSE:—Victory, to the right, extending a chaplet.
REVERSE:—An owl. Monogram 89.
R. Rochette, 'Jour. des Sav.,' 1839, p. 104. 'Ariana Antiqua,' p. 280.

5.—□ Copper. Similar devices. British Museum monograms, Nos. 89 and 89*a*.
'Num. Chron.,' vol. xvi., pl. p. 108, fig. 3.

[1] [I regret to say that my available notes on the typical details of Colonel Abbott's coins are very imperfect. I was greatly pressed for time on the only opportunity I had of inspecting his rich and varied collection; and, at the moment, entertained no design of publishing the result of my scrutiny; hence my memoranda refer to doubtful and difficult readings, special coincidences of design, and monogrammatic data, rather than to the *die* specifications ordinarily demanded by exact numismatic science. Further, I have to note, that my compulsory haste denied me even a bare sight of the copper series of a cabinet whose silver specimens promised so much: and, indeed, whose contents in that metal, whether in regard to discretion of selection or perfection of preservation, are unequalled by any public or private collection I have hitherto examined.]

## XX. MENANDER.

1.—Didrachma. (E. I. C. coin. Weight, 151·0 grs.)
OBVERSE:—Bare head of king, to the right.
LEGEND:—BAΣIΛEΩΣ ΣΩTHPoΣ MENANΔPoY.
REVERSE:—Thessalian Minerva, to the left.
ARIAN LEGEND:—*Mahárajasa Tradatasa Menadrása.*
Monograms, Σ and 30. Mr. Brereton, monogram, 8*b*.
'Ariana Antiqua,' pl. iii., fig. 13.

a)—Hemidrachma. Plate iii., fig. 5. Same types. Monograms, 18*a*, 18 associated with 93 on the same field, 22*c*, 31, 46*a* repeated on the same coin, 79, 86 repeated, 86 with Γ, É, and Σ, severally associated on the same field, 91, 92, 93, 94, 95.
'Ariana Antiqua,' pl. iii., fig. 14.

2.—Didrachma (cast). British Museum.
OBVERSE:—Bare head of king, to the left; the right hand grasps a javelin.
REVERSE:—Minerva to the left. Monogram 27.

a)—Hemidrachma. Same types. Monograms, 8*b*, 22, 27, 31, 46, 46*a*, 86 with Σ.

b)—Hemidrachma. Pl. xiv., fig. 1. Similar devices, but Minerva faces to the right, and the legends are arranged in one continuous circular scroll. Monograms, 27, 31*a*, 46.

3.—Didrachma.
OBVERSE:—Head of king with helmet, to the right.
REVERSE:—Minerva. Lady Headfort.

a)—Hemidrachma. Monograms, 8*b*, 22, 22*c*, 27, 31, 46*a* repeated, 86, with Σ, 91.
'Ariana Antiqua,' pl. iii., fig. 15.

4.—Hemidrachma.
OBVERSE:—Head of king, to the left, with helmet and javelin.
REVERSE:—Minerva.
'Ariana Antiqua,' pl. iv., fig. 2.

5.—Hemidrachma.
OBVERSE:—Helmeted head, as in No. 3.
REVERSE:—An owl. Monograms, 27, 31.

6.—□ Copper. Large coin. Weight, 550·5 grains.
OBVERSE:—Helmeted head of king, to the right.
REVERSE:—Horse, free. Monogram, No. 30 (?). Mr. Brereton.

7.—□ Copper. Weight, 316 grains.
OBVERSE:—Bull's head, to the front.
REVERSE:—Tripod.
Monograms, 8*a*; another coin (in weight, 228 grs.), 8*a*; a third, No. 31*a*, with an Arian *m* in the field. Mr. Brereton.

8.—□ Copper. Plate xxxii., fig. 8. Weight, 342 grains.
OBVERSE:—Bare head, to the right.
REVERSE:—A dolphin. Monogram 30, with H on the field.
'Ariana Antiqua,' pl. iv., fig. 3.

9.—□ Copper.
OBVERSE:—Bare head, to the left, with javelin, as in No. 2.
REVERSE:—Minerva, to the right. Monograms, 27, 31, 71.
'Ariana Antiqua,' pl. iv., fig. 7.

10.—□ Copper. Plate xiv., fig. 3.
OBVERSE:—Helmeted head, to the right.
REVERSE:—Winged figure of Victory, to the right, with palm-branch and wreath. Monograms, 27, 31, 46, 71, 93.
'Ariana Antiqua,' pl. iv., figs. 5, 6.

a)—□ Copper.
REVERSE:—Victory, to the left.
Monograms, 31*a*, with B. Another coin has B alone.
'Ariana Antiqua,' pl. iv., fig. 4.
There are other subordinate varieties of these coins, see 'Ariana Antiqua,' p. 285.

11.—□ Copper. Plate xxxii., fig. 6.
OBVERSE:—Helmeted head, to the right.
REVERSE:—Owl. 'Ariana Antiqua,' pl. iv., fig. 8.

12.—□ Copper. Plate xxxii., fig. 5.
OBVERSE:—Helmeted head, to the right.
REVERSE:—Shield of Minerva. Monograms, M (?), 46, 46*a*.
'Ariana Antiqua,' pl. iv., fig. 12.

13—□ Copper. Plate xxxii., fig. 9.
OBVERSE:—Boar's head.
REVERSE:—Palm branch. Monogram, H.
'Ariana Antiqua,' pl. iv., fig. 9.

14.—□ Copper. Plate xiv., fig. 2.
OBVERSE—Elephant's head.
REVERSE:—Club of Hercules.
Monograms, 27, associated in the several instances with the isolated letters A A; 31, ditto, A Δ. Colonel Bush, Arian monogram, *San.*
'Ariana Antiqua,' pl. iv., fig. 10.

15.—□ Copper. Plate xxxii., fig. 7.
OBVERSE:—Wheel.
REVERSE:—Club. 'Ariana Antiqua,' pl. iv., fig. 11.

16.—□ Copper.
OBVERSE.—Minerva to the left, with a spear resting on her left arm—shield in front of the knee—right hand extended.
LEGEND:—ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΜΕΝΑΝΔΡΟΥ.
REVERSE:—Indian lion, to the left.
ARIAN LEGEND:—*Mâhârajasa Dhramikasa Menandrasa.* British Museum.
Quoted also by Wilson, 'Ariana Antiqua,' p. 217, from an imperfect coin described by M. R. Rochette, 'Jour. des Sav.,' Dec. 1838, p. 751.

17.—□ Copper.
OBVERSE:—Elephant, to the left.
Legend imperfect, but exhibiting traces of the name of Menander:—
*βασιΛΕΩΣ ΣΩΤΗΡΟΣ μΕΝανδρου.*
REVERSE:—An ankuş (or elephant-goad).
Arian Legend imperfect:—[*Mâhâra*]*jasa Trada*[*tasa*] . . . .
Monogram, No. 96. Mr. Bayley.

## XXI. STRATO.

1.—Didrachma. (Cast).

OBVERSE:—Helmeted head of the king, to the right.

LEGEND:—βασιλεωΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ στρΑΤΩΝΟΣ.

REVERSE:—Thessalian Minerva, to the left.

Arian Legend incomplete:— . . . . *Pratichasa Tradatasa Stratasa.*

Monogram, 20*a*. Capt. Hay

2.—Hemidrachma.

OBVERSE:—Bare head, to the right.

LEGEND:—ΒΑΣΙΛΕΩΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Minerva.

ARIAN LEGEND:—*Mâhârajasa Pratichasa Tradatasa Stratasa.*

Two specimens. British Museum. Monogram, No. 8*a*.

3.—□ Copper.

OBVERSE:—Apollo, as in Apollodotus' coin, No. 7.

REVERSE:—Tripod.

E. I. H., monogram, No. 8*a*.

4.—□ Copper.

OBVERSE:—King's bust, with club resting on his right shoulder.

LEGEND:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Victory.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Stratasa.*

Monograms, No. 22*c* (?), 22*e*. Mr. Bayley.

5.—□ Copper.

OBVERSE:—Type as in No. 4.

LEGEND:—ΒΙΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΔΙΚΑΙΟΥ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Type as in No. 4.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Dhramikasa Stratasa.*

Monogram No. 22*e*. British Musuem. Other monograms, Nos. 22 and 22*b*.

6.—○ Copper.

OBVERSE:—Bare head of king to the right, as in the silver hemidrachmas.

LEGEND, imperfect:—ΒΑΣΙΛΕωσ επιφανουσ σωτηροσ ΣΤΡΑΤΩΝΟΣ.

REVERSE:—Victory with (palm branch? and) chaplet, to the right.

ARIAN LEGEND.—*Mâhârajasa Pradichasa (Tradata)sa Stratasa.*

Monogram 108*a*.? Colonel T. Bush.

## XXI[a]. AGATHOCLEIA

(WIFE OF STRATO).

1.—□ Copper. Plate xxxii., fig. 2.

OBVERSE:—Female head, helmeted.

LEGEND:—ΒΑΣΙΛΙΣΣΑΣ ΘΕΟΤΡΟΠΟΥ ΑΓΑΘΟΚΛΕΙΑΣ.

REVERSE:—Hercules with club, seated.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Dhramikasa Stratasa.*

Monogram No. 22*b*. Mr. Bayley.

'Ariana Antiqua,' pl. vi., fig. 10.

I notice in this place, irrespective of the order of time, a series of debased derivatives from the normal type of Strato's hemidrachmas (No. 2 *suprâ*), which are peculiarly identified with the original mintage, not only in obvious imitation, but in

the progressive degradation of certain associate pieces bearing that monarch's name, which have been found in company with the only considerable hoard of these coins that has as yet been discovered.[1]

The serial class is remarkable in that, while continuing the same standard devices as the prototype, it eventually lowers the title of *Máhárája*, on the reverse, into that of *Satrap*; and it is further interesting in the exemplification of the speedy obscuration of the Greek legends, while the Arian writing remains well-defined and intelligible, as in the parallel instance of the money of the Sáh kings, where the local Pálí appears in the highest perfection in the presence of the meaningless repetition of Greek outlines on the obverse. In its local aspect also, this particular hoard is instructive, as, although solitary specimens of these and kindred issues may have found their way to other parts of the country, yet the collection of so many successional coins, unmixed with foreign currencies, would seem to indicate an ordinary accumulation of every-day life, either made on the spot or gathered from the circulating medium of no remote locality.

Major Cunningham, in a paper in the 'Journal of the As. Soc. Beng.' (1854, p. 679), with persevering assiduity, endeavours to reconcile the degraded Greek legends with the indigenous inscriptions on the reverse, and essays to discover owners for the names—which read but vaguely even in their Arian form—amid the Hindú dynasties of Hustinápur and Dehli.[2]

Passing over the progressive steps of barbarization in the jumbled Greek legends of all those coins that bear the name of Strato on the reverse, and rejecting unconditionally the claim of Major Cunningham's PoΣA ΣTΩNoΣ to any separate identity, I come to the class of pieces which bear on their obverse variously the titles of BAΣIΛEΩΣ BAΣIΛEΩN and BAΣIΛEΩΣ ΣΩTHPoΣ, followed by portions of a name or title which reads as PAZ and PAZIoBA. On the reverse this money exchanges the legend of *Máhárajasa Tradatasa Stratasa* for *Chatrapasa apratichakrasa Ranjabalasa*.[3] Whether the PAZIoBA of the obverse legend be an imperfect attempt at a Greek rendering of the native name is of but little consequence, as we can hardly reconcile Ranjabala's humble titles on the reverse with the higher designation applied to Strato himself, or the more pompous BAΣIΛEΩΣ BAΣIΛEΩN, assumed by that monarch's successors, which figure indifferently in contact with and contrast to the grade of *Satrap*, to whose dignities alone the former limits his claim. In brief, the coins would merely seem to exemplify an oft-recurring phase in Indian Imperialism, where the decline of the central power encourages, and at times necessitates, the effective assertion of independence by the local rulers, however much they may avoid or delay the overt act of positive disavowal of allegiance.

The monograms on the debased coins of Strato are entered under Nos. 97 to 99. Those on Ranjabala's money are reproduced as Nos. 100 to 104.[4]

[1] [Major Cunningham observes: 'The greatest number were procured at Mathura, on the Jumna, and were said to have been found in the ruins of the city, along with some rude hemidrachmas of Strato' ('Jour. As. Soc. Beng.,' vol. vii., 1854, p. 681). I do not know how many of these mixed pieces Major Cunningham obtained on this occasion, but my native coin-collector, who gleaned part of the remainder, brought me 84 coins, more than half of which number were Strato's.]

[2] [See Useful Tables *infrá*. Table xix. *Rájapála*.]

[3] [Major Cunningham makes it *Rájabálasa*, but the better preserved coins give the suffix *n* in full distinctness. His translation of *Apratichakra*, as 'invincible with the the discus,' is satisfactory.]

[4] [No. 101 is interpreted by Major Cunningham as *Hasti* for *Hastinápura*, the ancient Hindu capital on the Ganges above Meerut.]

## XXII.—Hippostratus.

1.—Didrachma.

Obverse:—Bare head of king, to the right, with fillet.

Legend:—ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΙΠΠΟΣΤΡΑΤΟΥ.

Reverse:—Standing figure of Demeter, with crested helmet, right hand extended, the left supports a cornucopia.

Arian Legend:—*Mahárajasa Tradatasa Hipastratasa.*

Monogram, No. 85.

Mr. Bayley and B.M. 'Num. Chron.,' vol. xvi., pl. p. 108, fig. 5.

a).—Hemidrachma. Similar types. Monogram, No. 85. Captain Hay.

2.—Didrachma. (British Museum coin, weight 139 gr.)

Obverse:—Bare head of king, to the right, with fillet.

Legend:—ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΣΩΤΗΡΟΣ ΙΠΠΟΣΤΡΑΤΟΥ.

Reverse:—Helmeted figure on horseback, to the right; horse in motion.

Arian Legend:—*Mahárajasa Tradatasa Mahátasa Jayátasa Hipastratasa.*

Monogram, No. 105.

Mr. Bayley, No. 105, with Arian *lo* on the field. Captain Hay, 105*a* with *lo*, and No. 106. M. N. (?) Col. Abbott, 38*a*. British Museum, No. 47*c*. 'Num. Chron.,' vol. xvi, pl. p. 108, fig. 4.

a).—Hemidrachma. Similar types. Monogram, 105*a*. Mr. Brereton.

3.—Didrachma. (British Museum coin; weight, 144·5 grains).

Obverse:—Device and legend as in No. 1.

Reverse:—Horseman, motionless. Legend as in No. 2.

Monogram, No. 105, with the several adjuncts of No. 106, and the detached Arian letters *lo* and *pri*. Mr. Bayley, British Museum, etc.

4.—□ Copper.

Obverse:—Apollo standing, to the right. Legend as in No. 1.

Reverse:—A tripod. Legend as in No. 1.

Monogram, 85. Mr. Bayley.

5.—□ Copper.

Obverse:—Jove enthroned. Legend as in No. 1.

Reverse:—Horse, standing, to the left.

Arian Legend:—*Máhárajasa Tradatasa Jayatasa Hipastratasa.*

Cunningham, 'Jour. As. Soc. Beng.,' vol. xi., pl. fig. 9.

## XXIII. Telephus.

1.—Major Cunningham has made public the only known coin of this king, ('Jour. As. Soc. Beng.,' vol. xi., p. 133), which he describes as follows:—

Obverse:—'An ancient giant, full front, with snaky legs, which curl upwards on each side.'

Legend:—ΒΑΣΙΛΕΩΣ ΕΤΕΡΓΕΤΟΥ ΤΗΛΕΦΟΥ.

Reverse:—'A draped male figure standing, to the left, his head crowned with rays, and holding in his right hand a spear; to the right, a clothed female figure, with a crescent on her head.'

Arian Legend:—*Máhárajasa . . . . kramasa Taliphasa.*

Monogram, No. 107.

## XXIV. HERMÆUS.

1.—Didrachma. Plate xviii., fig. 1. (Selected British Museum coins; weight, 140 and 144 grains).

OBVERSE:—Head of king, to the right.

LEGEND:—BAΣIΛEΩΣ ΣΩTHPoΣ EPMAIoY.

REVERSE:—Jove enthroned, right hand extended.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Hermayasa.*

Monogram, E. I. C., Nos. 17*b*, 36, 108*b*.

'Ariana Antiqua,' pl. v., fig. 3.

British Museum monograms, 32*a*, 108, 108*a*, associated with 110. Mr. Brereton, 109. Colonel Bush. 108*c*.

a)—Hemidrachma. Similar types. Monograms, British Museum, 21, 33*b*, 48*c*, 90*a*, 111, 112. B. I. 113. Mr. Brereton, 22*b*. Captain Hay, 114. Mr. Freeling, 53*a*.

'Jour. des Sav.,' 1835, i. 13. 'Ariana Antiqua,' pl. v., fig. 3.

### HERMÆUS AND CALLIOPE.

2.—Hemidrachma.

OBVERSE:—Male and female heads, to the right.

LEGEND:—BAΣIΛEΩΣ ΣΩTHPoΣ EPMAIoY KAI KAΛΛIoΠHΣ.

REVERSE:—Horseman, as in Antimachus' coins.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Hermayasa;* and at the bottom, in the reverse direction, *Kaliyapaya.*

'Ariana Antiqua,' pl. xxi., fig. 14. Capt. Robinson, Mr. Bayley, Mr. Brereton, etc., all have the same monogram, No. 108*a*.

3.—◯ Copper. Plate xviii., figs. 2, 3, 4. Identical in type and legends with No. 1.

'Ariana Antiqua,' pl. v., figs. 4, 5, 6.

Monograms, No. 115, with Bactrian letters *lo*, and No. 115*a*, with the several Bactrian letters classed under No. 116.

a)—◯ Copper. Small coins. Similar types.

4.—□ Copper. Plate xxviii., fig. 11.

OBVERSE:—Bust of king, with curiously arranged head dress.

LEGEND:—BAΣIΛEΩΣ ΣΩTHPoΣ EPMAIoY.

REVERSE:—Horse standing to the right.

ARIAN LEGEND:—*Mâhârajasa Tradatasa Hermayasa.*

Monograms, 31, 109.

'Ariana Antiqua,' pl. v., fig. 7.

a)—Variety. 'Ariana Antiqua,' pl. xxi., fig. 15. Head-dress as in Amyntas' coin, pl. xxxii., fig. 1, monogram 109.

Extra Monograms of Hermæus:—20*b*, 24*b*, 36*a*, 38, 108*b*, with Arian letters *k*, *s*; 115*a*, with elongated downstroke of *r* (or 115*b*), associated with the Bactrian letters *trá*, *v*, *dh*, *sh*, and *n* (?); also 117 to 119 inclusive.

## XXIV^a. SU-HERMÆUS.

1.—⊙ Copper. Plate xviii., fig. 9; and pl. xviii., fig. 10.
OBVERSE:—Head of king, to the right.
LEGEND, imperfect:—ΒΑΣΙΛΕΩΣ ΣΤΗΡΟΣ ΣΥ ΕΡΜΑΙΟΥ.
REVERSE:—Hercules standing with his club resting on the ground.
ARIAN LEGEND:—*Dhama Phidasa Kujula Kasasa Kushanayatugasa.*
'Ariana Antiqua,' pl. v., figs. 8, 9, etc.

These coins are usually deficient in monograms. In one case I notice the Bactrian combination No. 63 on the reverse field.

Major Cunningham conjectures these mintages to have formed a portion of the issues of Kozoula Kadphises (No. xxvi.), struck during the lifetime of Hermæus.—'Jour. As. Soc. Beng.,' 1854, p. 709.

## XXV. MAUAS.

1.—Didrachma. (Weight, 151·4 grains).
OBVERSE:—Male figure, to the front; right arm extended, the left supports a spear.
LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΜΑΥΟΥ.
REVERSE:—Victory, with chaplet, to the right.
ARIAN LEGEND:—*Rajadirajasa Mahatasa Moasa.*
Monogram, No. 385.
British Museum, 385. Capt. Robinson, No. 38*a*. Lady Sale's coin (weight, 143 grains), monogram, No. 89.

*)—Hemidrachma. Similar types.
Capt. Robinson, monogram 38*a*. Capt. Hay, No. 64.

2.—Didrachma.
OBVERSE:—A biga, with horses at speed. The driver wears a helmet; the chief figure holds a spear, a nimbus surrounds his head.
REVERSE:—Jove enthroned, as in Hermæus' coins, with triple-pointed spear (trident?),
Monogram, No. 107*a*. Capt. Robinson.

3.—⊙ Copper. Plate xiii., fig. 4.
OBVERSE:—Elephant's head.
REVERSE:—Caduceus.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΑΥΟΥ.
Monogram, No. 89.
British Museum. 'Ariana Antiqua,' pl. viii., fig. 11.

4.—□ Copper (small coin).
OBVERSE:—Apollo, to the front, as in Apollodotus' coins: arrow in the right, and bow in the left hand.
LEGEND:—ΒΑΣΙΛΕΩΣ ΜΑΥΟΥ.
REVERSE:—Tripod.
ARIAN LEGEND:—*Mahárajasa Moasa.*
British Museum. Mr. Brereton.

5.—□ Copper.

OBVERSE:—Female figure, to the front, with spear; crescent above the head. Two six-pointed stars or constellations appear in the upper part of the field, one on each side of the figure.

LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΜΑΥΟΥ.

REVERSE:—Victory with chaplet, to the left.

ARIAN LEGEND:—*Rajadirajasa Mahâtusa Moasa.*

Monogram, No. 120. British Museum, and less perfect coin B. I.

6.—□ Copper.

OBVERSE:—Jove enthroned, with small figure at the side.

REVERSE:—Female figure, as on the obverse of No. 5.

Monogram, No. 120. 'Ariana Antiqua,' p. 315.

Variety.

REVERSE:—Figure as above; but the crescent is strangely transformed, and the stars on the field are wanting.

Monogram 120. Mr. Brereton.

7.—○ Copper.[1]

OBVERSE:—Figure clothed in skins, with nimbus.

REVERSE:—Indian bull, to the left.

British Museum. Monogram, No. 89.

Monogram, No. 52. Mr. Bayley and Capt. Robinson.

8.—□ Copper. Plate xliii., fig. 11.

OBVERSE:—Male figure, with club and trident, flowing robes, etc.

Monogram, No. 121.

REVERSE:—Victory, with loose garments (similar to the figure on the obverse), and a varied style of chaplet.

'Ariana Antiqua,' pl. viii., fig. 10. Monogram, 122. B. I. Monogram, 123.

9.—□ Copper. Pl. xv., fig. 11.

OBVERSE:—Elephant.

REVERSE:—Seated figure.

Monogram, No. 115*b*. Mr. Frere.

'Jour. des Sav.,' 1839.

10.—□ Copper. Pl. xv., fig. 7.

OBVERSE:—Male figure, to the left, in flowing garments, holding a chaplet.

REVERSE:—Indian lion, to the right.

B.I. Monogram, 112*a*.

11.—○ Copper.

OBVERSE:—Hercules to the front, with club and lion-skin, the right hand rests upon the hip.

REVERSE:—Indian lion, to the left.

Monogram, No. 89. Mr. Brereton.

[1] [A coin of this type is engraved in Mr. H. T. Prinsep's 'Historical Results,' pl. v., fig. 1.]

12.—□ Copper.
OBVERSE:—Neptune, with trident, treading upon a prostrate figure.
REVERSE:—Figure surrounded with branches.
Monogrom, No. 120.
Colonel Nuthall. Mr. Brereton, and 'Ariana Antiqua,' p. 314.

13.—□ Copper.
OBVERSE:—Neptune, with the right foot placed on a prostrate figure as in No. 12; the left hand rests on a trident, while the right is raised in the act of hurling the thunderbolt.
REVERSE:—As in No. 12. Monogram, illegible. Lady Elliot.

14.—□ Copper.
OBVERSE:—As No. 13, except that Neptune holds a palm-branch in the left hand in lieu of the trident.
REVERSE:—As No 13.
Monogram, a modification of No. 115*b*. Mr. Bayley.

15.—□ Copper.
OBVERSE:—Horseman, with a fold of his dress flying loose behind him.
Monogram, illegible.
REVERSE:—Helmeted figure, in loose garments, moving to the right, holding a garland in the right and a spear in the left hand.
Monogram, *mi*. Mr. Bayley.

16.—□ Copper.
OBVERSE:—Horseman, with spear.
REVERSE:—Winged Victory, to the left, holding a chaplet in the right hand.
Monogram, No. 115*b*. Mr. Bayley.

17.—□ Copper..
OBVERSE:—Standing male figure, to the front; right arm uplifted, in the left a club.
Monogram, No. 115*b*, with an Arian *ti*.
REVERSE:—Indian bull, to the right.
Monogram, No. 115*a*. Mr. Bayley.
A second coin, in the possession of Mr. H. Brereton, gives the name clearly as MATOY.

18.—□ Copper.
OBVERSE:—Elephant.
REVERSE:—Indian bull. Mr. Brereton. Capt. Hay.

## XXVI. KADPHISES.

1.—Copper. Plate XXVIII., fig. 12.
OBVERSE:—Head as in the Su-Hermæus' coins.
LEGEND:—KOPΣHAo [Variety, KOPoNAo] KOZOTAO KAΔΦIZOY.
REVERSE:—Hercules as above.
ARIAN LEGEND:—*Dhama Phidasa Kujula Kasasa Kushanayatugasa.*[1]
Monograms, Arian *dh* with *r*. 'Ariana Antiqua,' pl. xi., figs. 10, 11.

[1] [Major Cunningham, in the 'Jour. As. Soc. Beng.,' vol. vii. of 1854, p. 709, transcribes this legend as follows:—*Kujula Kasasa Kushanga Yathagasa Dhamapidasa.*

## XXVI[a]. Kozola Kadaphes.

1.—○ Copper small coin. Plate xviii., figs. 13, 14, 15; and pl. xxviii., figs. 13, 14.
Obverse:—Youthful head.
Legend:—KoZoΛA KAΔAΦEΣ XOPAN ϹΥ ZAΘoΥ.
Reverse:—A Scythic figure.
Arian Legend:—*Khashanasa Yauasa Kuyula* [*Kuyanla?*] *Kaphsasa Sachha dhani phidasa.*
Monogram, No. 124. Some specimens add the Bactrian letter inserted in the plate under No. 125.
'Ariana Antiqua,' pl. xi., fig. 14.

## XXVI[b]. Kodes.

1.—Hemidrachma. Plate xiii., figs. 11, 12, 13.
Obverse:—Barbarously executed head of king.
Legend:—KωΔoΥ.
Reverse:—Erect figure, with flames issuing from the shoulders; the right hand rests upon a spear.
Legend:—PAHΘPoΥ MAKAP.
'Jour. des Sav.,' 1834, pl. fig. 8; 'Ariana Antiqua,' pl. ix., figs. 1, 2, 3, 5.

2.—Hemidrachma. Plate xxxii., figs. 16, 17, 18.
Obverse:—Head as above.
Reverse:—Horse's head. KωΔ.
'Jour. des Sav.,' 1834, pl. fig. 9. 'Ariana Antiqua,' pl. ix., figs. 4, 6, 7.

## XXVII. Vonones (and Azas).

### Class A.

I understand that Major Cunningham has discovered coins with the above combination of names. The specimens are engraved in his unpublished plates, but I do not consider myself authorized to quote them in any detail beyond this notice of the interesting historical fact they suffice to substantiate.

## Vonones (and Spalahores).

### Class B.

1.—Didrachma.
Obverse:—Azas' horseman with spear at the charge, to the right.
Legend:—BAΣIΛEΩΣ BAΣIΛEΩN MEΓAΛoΥ oNΩNoΥ.
Reverse:—Jupiter with spear and bolts.
Arian Legend:—*Máháraja Bhrata Dhramikasa Spalahorasa.*
Monogram, No. 53*b*. Capt. Robinson.

a)—Hemidrachma. Pl. xv., fig. 5. Similar types and legends.
Monograms, 53*b*, 126. 'Ariana Antiqua,' pl. viii., fig. 8.

The nearly parallel epigraph on Kozola Kadaphes' money is transliterated and translated thus—*Kushanga Yathaasa Kujula Kaphsasa Sachha dharmapidasa*, 'Coin of the king of the Khushang Kujala Kaphsa, the crown of the true Dharma."]

2.—□ Copper. Plate XV., fig. 10.

OBVERSE:—Hercules, with club and lion's skin, right hand raised to the head.

LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΟΝΩΝΟΥ.

REVERSE:—Minerva, to the left, armed with shield and spear, right arm extended.

ARIAN LEGEND:—*Mâhâraja Bhrata Dhramikasa Spalahorasa.*

Monograms, No. 126. B.I. 126*a*.

'Jour. des Sav.,' 1835, pl. ii., fig. 20. 'Ariana Antiqua,' pl. viii., fig. 9.

3.—□ Copper.

OBVERSE:—As in No. 2.

REVERSE.—Device as in No. 2.

ARIAN LEGEND:—*Spahora Bhrata Dhramikasa Spalahorasa.*

Monogram, 126. Mr. Brereton.

## VONONES (AND SPALAGADAMES, SON OF SPALAHORES.

### CLASS C.

1.—Hemidrachma.

OBVERSE:—Azas' horseman, with spear.

LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΟΝΩΝΟΥ.

REVERSE:—Jupiter, with spear and bolts.

ARIAN LEGEND:—*Spalahora Putrâsa Dhramikasa Spalagadamasa.*

Monograms, British Museum coin, 127. Col. Sykes, 132*a*. Mr. Brereton, 48*c*, 128, 128*a*.

2.—□ Copper.

OBVERSE:—Hercules, as in No. 2, class B.

LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ μεγαΛΟΥ ΟΝΩΝΟΥ.

REVERSE:—

ARIAN LEGEND:—*Spalhora Putrâsa Dhramiasa (Spala)gadamasa.*

Monogram, 128. Mr. Brereton.

## SPALIRISES AND AZAS.

### CLASS D.

1.—Didrachma.

OBVERSE:—Azas' horseman.

LEGEND:—ΒΑ[ΙΛΕ]ΩΣ ΜΕΓΑΛΟΥ ΡΠΑΛΙΡΙ[Σ]ΟΥ.

REVERSE:—Jove, as above.

ARIAN LEGEND:—*Mâhârajasa Mahâtakasa Ayasa.*

Monogram, 130. Mr. Frere.

*a*)—Hemidrachma. Similar types.

Monogram, 129, with Bactrian letters, *si*. Mr. Brereton.

2.—○ Copper.

OBVERSE:—Azas' horseman.

LEGEND:—ΒΑ[ΙΛΕ]ΩΣ ΜΕΓΑΛΟΥ ΡΠΑΛΙΡΙ[Σ]ΟΥ.

REVERSE:—A bow and arrow.

ARIAN LEGEND:—*Mâhârajasa Mahâtakasa Ayasa.*

Monogram, 127*b*. Mr. Bayley.

Class C*a*.

## XXVIII. Spalyrios or Spalagadames (alone).

THE BROTHER OF THE KING.

1.—□ Copper. Pl. xv., fig. 9; pl. xxviii., fig. 6.

Obverse:—Azas' horseman.

Legend:—ϹΗΑΛΥΡΙΟϹ ΔΙΚΑΙΟΥ ΑΔΕΛΦΟΥ ΤΟΥ ΒΑϹΙΛΕΩϹ.

Reverse:—Hercules seated on a rock.

Arian Legend:—*Spalahora putrâsa Dhramiasa Spalagadamasa.*

Monograms, Nos. 48*c*, 127*c*, 128. 'Ariana Antiqua,' pl. viii., fig. 13.

Class D*a*.

## XXIX. Spalirises (alone).

1.—Hemidrachma.

Obverse:—Azas' horseman; spear at the charge.

Legend imperfect:—ΒΑϹΙΛΕΩΝ ΒΑ . . . . . ΡΠΑΛΙΡΙϹ*ου*.

Reverse:—Neptune to the front, with trident and bolts.

Arian Legend:—*Mâhârajasa* . . . . . *Spalirisasa.*

Monogram, 48*c*. Capt. Hay.

2.—□ Copper. Plate xv., fig. 6; pl. xxviii., fig. 7.

Obverse:—Female figure, to the left.

Legend:—ΒΑϹΙΛΕΩΝ ΒΑϹΙΛΕΩϹ ΜΕΓΑΛΟΥ ΡΠΑΛΙΡΙϹΟΥ.

Reverse:—Jove enthroned.

Arian Legend:—*Mâhârajasa Mâhâtakasa Spalirisasa.*

Monograms, Nos. 131, 131*a*, and 131*b*.

'Ariana Antiqua, pl. viii., fig. 12.

## XXX. Azas.

1.—Didrachma.

Obverse:—The standard Azas' type of horseman, to the right; the spear point slightly depressed.

Legend:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΟΥ.

Reverse:—Female figure, with palm-branch in the left, and a four-pointed object in the right hand, somewhat after the nature of the Scythian monograms, No. 169, etc.

Arian Legend:—*Mâhârajasa Rajarajasa Mahatasa Ayasa.*

Monogram, Captain Robinson, 132, with Arian letters, *mi.*

'Ariana Antiqua,' pl. vi., fig. 12. 'Jour. des Sav.,' 1835, ii., 16, monogram, 133 with *san.*

a).—Hemidrachmas.

Monograms, No. 133, with Arian letters *bh* and *dh*; No. 133, with the word *san*; No. 38*a*, with severally 53*b* and an Arian *t*; No. 38*a*, with a Greek A and an Arian *t*; No. 38*a*, with an Arian *t* alone; No. 134, with an Arian *si*; No. 134, with *dh* and *mi.*

'Ariana Antiqua,' pl. vi., fig. 18.

2.—Didrachma.

Obverse:—Horseman, as above.

Reverse:—Minerva Promachos, to the left.

Monograms 85; 85, with Arian *s* on obverse; 85 simple with 132; 133, with the Arian word *san*, and No. 63*a*.

a).—Hemidrachma.
Monograms, British Museum, 85; Captain Robinson, 85 simple with 132.

3.—Didrachma.
OBVERSE:—Horseman, as above.
REVERSE:—Jupiter, with spear and bolts.
Monograms, Capt. Robinson, 132*a* with *bh*. British Museum, 132*a* with *dh*.

4.—Variety of No. 3. Didrachma.
OBVERSE:—Horseman, as above, with the Arian letters *Pri* below the horse.
REVERSE:—Jove, with the spear or sceptre, triple-pointed, the points diverging from one centre; nimbus encircles the head.
Monogram, No. 85.

5.—Hemidrachma.
OBVERSE:—As above.
Monogram, Arian letters *li*.
REVERSE:—Jove, with triple-pointed sceptre; but the right hand is elevated in the act of throwing the thunderbolt.
Monograms, No. 85*a*, with an Arian *a*. Captain Robinson.

a).—Hemidrachma. Variant.
OBVERSE:—As above.
REVERSE:—Jupiter rayed, to the front, leaning on a spear; the bolts are held in the right hand low down.
Monogram, No. 135. Captain Robinson.

6.—Didrachma.
OBVERSE:—The Azas' horseman, to the right, without the spear; the right hand of the figure is extended above the horse's head.
Monogram, an Arian *s*.
REVERSE:—Minerva, to the right, helmeted and armed with buckler; right hand extended.
Monograms, Captain Robinson, 52, with *a*. Lady Elliot, double monogram, 138 and 139, without the Bactrian adjunct of the latter. Mr. Carne's collection, monogram, No. 141, with the several Arian letters *san*, *si*, *pi*, or *dh*.

(6).—Variety.
OBVERSE:—Horseman, as above, with whip in the right hand and bow behind the saddle.
REVERSE:—As in No. 6.
Monogram, 85 simple, with 133*b*.

a).—Hemidrachma.
Monogram 85. Mr. Bayley.

b).—Variety.
REVERSE:—Minerva, to the left.
Monograms, obverse, Arian *so*; reverse, 85. Mr. Brereton.

7.—Didrachma. Plate xvii., fig. 17 (?).

OBVERSE:—Horseman, as above, with whip in the right hand, bow at the back of the saddle.

REVERSE:—Standing figure, with spear, holding a small statue of Victory.

'Ariana Antiqua,' pl. vi., figs. 15, 16 (?), 17.

British Museum, monograms, 38*a* with 53, and Arian letters *t*, *bu*, *dh*, etc.; others, with *t*, omit No. 53. B.I., monogram, obverse, Arian *ji*; reverse, 134*a* associated with 53*b* and 63; a second, reverse, No. 42 with 136, and an Arian *dh*. Mr. Brereton, obverse, monogram, *san*; reverse, as in the first cited B.I. coin.

a).—Hemidrachma.

Monograms, No. 137, with *san*; a second; No. 138, with *dh* and *s*. Lady Elliot. Mr. Brereton, 38*a* with Arian *t*; a second, obverse, Arian *s*; reverse, 38*a* with 139.

8.—Didrachma. Plate xvii., fig. 15.

OBVERSE:—Horseman, as above.

Monogram, Arian *ti*.

REVERSE:—Minerva, with spear, to the right; bare head, and right arm extended.

Monogram, 85 simple with 133*a*. B.I., obverse, monogram, Arian *ti*; reverse, 85*b* with 133*b*.

'Ariana Antiqua,' pl. vi., fig. 13.

(8).—Variety. Billon.

REVERSE:—Similar figure, with triple-pointed spear.

Monogram, Arian *si* and 134*b*.

9.—Didrachma. Billon. Plate xvii., fig. 16.

OBVERSE:—As above.

REVERSE:—Neptune, with trident, to the front.

Monogram, No. 140, with *si*.

'Ariana Antiqua,' pl. vi., fig. 14.

10.—Hemidrachma. Plate xvii., fig. 18.

OBVERSE:—Horseman, as above, with bow and whip.

REVERSE:—Minerva, to the front, armed with spear and shield, the right arm upraised.

Monograms 135*a*, with *ssh*; 135*b* and Arian monogram 142, *sa shi ?* 135*b* with 39*a*. Another: obverse, monogram *a*; reverse, 140*a*, with an indistinct symbol like 132. Miscellaneous: obverse, mint-marks Arian letters *s*, *l*, *g*, and *sá*.

'Ariana Antiqua,' pl. vi., fig. 19.

11.—Drachma.

OBVERSE:—King, standing, to the left; right hand extended, and sloped spear on his left shoulder.

REVERSE:—Winged figure of Victory, to the right, holding out a chaplet.

Monogram, No. 64.

10.—□ Copper. Plate xvii., fig. 14.

OBVERSE:—Neptune, treading on a prostrate figure. Legend as above.

REVERSE:—Female figure, surrounded by branches. Legend as above.

Monogram, No. 64. 'Ariana Antiqua,' pl. vii., fig. 5.

Mr. Brereton has a superstruck piece of this class, offering the peculiarity in that the obverse legend exhibits portions of the epigraph of two distinct dies: it may be represented in its present state thus—ΣΩΤΗΡΟΣ βασιΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΟΥ.[1]

11.—□ Copper.
OBVERSE:—King, riding on a Bactrian camel.
REVERSE:—Thibetan yâk (or long-haired bull).
'Ariana Antiqua,' pl. vii., fig. 6.

12.—□ Copper. Plate xvi., fig. 9.
OBVERSE:—King on horseback, with spear sloped.
REVERSE:—Indian bull, to the right.
Monograms, No. 85; 85 simple, with *t*, and the four variants classed under No. 143. Another: obverse, *san*; reverse, 134 with *si*.
'Ariana Antiqua,' pl. vii., fig. 12.

13.—□ Copper. Plate xv., fig. 8.
OBVERSE:—Hercules, to the front, with chaplet upraised in his right hand, and club in the left, after the manner of the reverse devices of Demetrius.
Monogram, 53*b*.
REVERSE:—Horse, free, to the right.
Monogram, *mi*. 'Ariana Antiqua,' pl. vii., fig. 7.

14.—○ Copper. Plate xvi., figs. 4, 5.
OBVERSE.—Elephant, to the right.
REVERSE:—Indian bull, to the right.
Monograms, Nos. 52 with Arian *a*; 85; 85 simple with 142*a*; 85 simple with 132.
'Ariana Antiqua,' pl. vii., fig. 10.

15.—○ Copper. Plate xvi., figs. 1, 2, 3.
OBVERSE.—Humped bull, to the right.
REVERSE:—Indian lion, to the right.
ARIAN LEGEND:—*Mâhârajasa Rajadirajasa Mahatasa Ayasa.*
Monograms, 132 with 145*a*, 135*a* with 39*a*, 135*b* with 39*a*, 143*b* with 39*a*, 144 with 138, 145 with 138, 145 with 146, 135*b* with 142, 85*b* with 133, 134*b* with *si*.
'Ariana Antiqua,' pl. vii., fig. 8.

a)—Small coins. Similar types. 'Ariana Antiqua,' pl. vii., fig. 9.

b)—□ (?) 'Ariana Antiqua,' pl. vii., fig. 3. Monogram, *a*. Rev. monogram, *pr*.

16.—○ Copper. Plate xvi., fig. 10.
OBVERSE:—Demeter, seated on a throne.
REVERSE:—Hermes, standing.
Arian legend as in No. 1.
Most common monogram, No. 135*b* associated with 142.
'Ariana Antiqua,' pl. vii., fig. 12.

[1] [Some months ago (1857) Mr. Bayley read an interesting paper, on the subject of the superstruck coins of Azes, at one of the meetings of the Numismatic Society.]

17.—○ Copper. Plate xvi., fig. 12.
OBVERSE:—Figure, seated cross-legged.
REVERSE:—Hermes, standing.
ARIAN LEGEND, as in No. 15.
Monograms, the combinations entered in plate xi.*c* from No. 147 to 153. 'Ariana Antiqua,' pl. vii., figs. 13, 14.

*a*)—Small coins, ditto. 'Ariana Antiqua,' pl. vii., fig. 15.

18.—○ Copper.
OBVERSE:—Female figure, clothed in Indian garments, standing to the front; the right arm is raised towards the head, and the left hand rests upon the hip.
REVERSE:—Humped bull, to the right.
Mr. Brereton, monogram 154. Mr. Bayley, monograms indistinct.

19.—○ Copper.
OBVERSE:—A lion, sejant.
LEGEND, blundered and unintelligible.
REVERSE:—Rude figure of Demeter, seated.
ARIAN LEGEND:—*Mâhârajasa* . . . . . *Ayasa.*
Monogram, No. 31*a*, with *ti*. Mr. Bayley.

20.—○ Copper. Minute coin. Types similar to No. 7.
Monograms, Obv. No. 155, and *mi*. Rev. No. 38*a* and *san*. Mr. Bayley.

21.—○ Copper. Types similar to □ Copper, No. 12.
Monogram 85. Mr. Brereton.

22.—□ Copper.
OBVERSE:—King on horseback, with the right hand extended.
Monogram 124*a*.
REVERSE:—Indian lion to the right.
ARIAN LEGEND, imperfect:—*Mâhârajasa Mahatasa* . . . . *Ayasa.*
Monogram indistinct. Col. T. Bush.

23.—○ Copper.
OBVERSE:—Azas' horseman with whip and bow.
Monogram, 157.
REVERSE:—Minerva, to the right; with sloped spear and right hand extended.
ARIAN LEGEND, as in No. 15.
Monograms, group 158.

24.—○ Copper. Plate xvii., fig. 22.
OBVERSE:—Horseman, with right hand raised.
Monogram 124*a*.
REVERSE:—Demeter, standing, to the front; right arm extended, the left supports the cornucopia.
ARIAN LEGEND:—*Mâhârajasa Mahatasa Dhramikasa Rajadirajasa Ayasa.*
Monograms, No. 156, 156 with *dh*, 156*a*, 156*b*, 156*c*, with variants of miscellaneous Bactrian letters on the field.

25.—Plate ii., figs. 11, 12.

OBVERSE:—Indian lion, to the right.

REVERSE:—Demeter, standing, to the left.

ARIAN LEGEND:—*Máhárajasa Rajatirajasa Mahatasa Ayasa.*

'Jour. As. Soc. Beng.,' vol. ix., p. 876.

## SUB-AZAS (ASPAVARMA).

1.—⊙ Copper.

OBVERSE:—Azas' horseman, with right hand holding a whip.

LEGEND:—BAΣIΛEΩΣ BAΣIΛEΩN MEΓAAOY AZOY.

Monogram, No. 157 (*Agaj ?*).

REVERSE:—Minerva, helmeted, with spear and shield, to the right; the right hand supports a small figure of Victory.

ARIAN LEGEND:[1]—*Indra Varma Putrása Aspavarmasa Strategasa Jayatasa* (General Aspavarma, son of Indra Varma, the victorious).

Monograms, No. 159, with 132, and the several Arian letters entered in the plate under No. 160.

As this catalogue does not profess to follow any authoritative serial distribution of the monarchs comprehended in the general list, I insert in this place, as most suitable, in obedience to typical order, certain obvious derivatives from the standard devices of Azas' mintages, which bear exclusively the names and titles of Satraps who may be supposed to have succeeded to the possession of local divisions of his once extensive dominions, but who refrained from arrogating to themselves the style and dignity of absolute monarchy.

## ZEIONISAS.

1.—Didrachma. Plate xxviii., fig. 5.

OBVERSE:—Azas' horseman, with right hand extended, and bow at the back of the saddle.

LEGEND illegible. Monogram 159.

REVERSE:—King, standing, to the front; supported by two figures in the act of placing a chaplet on his head.

ARIAN LEGEND, imperfect at the bottom:—*Jihaniasa.*

Monogram 161.

'Jour. des Sav.,' 1839, p. 102. 'Ariana Antiqua,' pl. viii., fig, 17. Cunningham, 'Jour As. Soc., Beng.,' 1854, pl. xxxv., fig. 1.

2.—Hemidrachma. Unique.

OBVERSE:—Horseman as above.

LEGEND, corrupt:—oNNIAIY YIoY ⊏ATPAΠ ZEIωNI⊏oY.

Monogram 159.

REVERSE:—Standing figure of the king receiving a chaplet from Demeter?

ARIAN LEGEND:—*Manigulasa Chatrapasa Putrasa, Chatrapasa Jihaniasa.*

Monogram, No. 162.

Mr. Bayley. See also Cunningham, *loc. cit.*, pl. xxxv., fig. 2.

[1] [Cunningham, 'Jour. As. Soc. Beng.,' 1854, p. 696. *Strategas* is identified with the Greek Στρατηγος.]

3.—○ Copper.

OBVERSE:—Indian bull, to the right.

LEGEND, corrupt and imperfect:—ΥΙ:ΛΙΥ ΥΙΥ ⊏ΑΤΡΑΠ.

Monogram, No. 159, with *san*.

ARIAN LEGEND:— . . . *gula Putrasa Chatrapasa* JIHANAYASA.

Monogram 163.

British Museum, two coins, from Major Cunningham's collection.

4.—□ Copper. Unique. Plate xlii., fig. 8.

OBVERSE:—Elephant.

LEGEND, corrupt and imperfect:—ΛΗΙΖΙΟΑΔΙ . . . . . ΖϹΙШΝΙ⊏.

Monogram, ק.

REVERSE:—Bull, to the left.

ARIAN LEGEND:—*Mani* . . . . . (Ji)*haneasa*.

Monogram as in the plate. Col. T. Bush.

5.—□ Copper.

OBVERSE:—Azas' horseman.

LEGEND, imperfect. Combination obtained from six specimens gives no more satisfactory result than the following:—ΓΑΤΟΥ ΤΟΥ ΧΑΡΑΝШ⊏ Α - ΕΙ⊏Α. Monogram indeterminate.

REVERSE:—*Sinha*, or Indian lion, to the right.

ARIAN LEGEND, likewise imperfect and incomplete:—*Chatrapasa Bhrata Daophasa Akasa Putrasa*.

Monograms, *pra*, X, etc.

'Ariana Antiqua,' pl. viii., fig. 2; and Cunningham, 'Jour. As. Soc. Beng.,' 1854, p. 695.

## XXXI. AZILISAS.

1.—Didrachma. Plate xvii., fig. 27.

OBVERSE:—Azas' horseman, with spear.

LEGEND:—ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΙΛΙΕΟΥ.

Monogram, *ti*.

REVERSE:—Figure, to the left, holding the four-pointed object in the right, and palm-branch in the left hand.

ARIAN LEGEND:—*Máhárajasa Rajarajasa Mahatasa Ayileshasa*.

Monograms, British Museum, 133 with *san* and *bh*; ditto, 134 with *si*.

British Museum monogram, Σ with *si* and *g*. Capt. Robinson, monogram 134 with *si* and *s*. B. I. Miscellaneous Arian letters, *san*, *si*, *bh*, *dh*, with *ti*, and A with *san*. 'Ariana Antiqua,' pl. viii., fig. 5.

a)—Hemidrachma. Similar types. British Museum monogram, 132*a*, with *i*. Capt. Robinson, monogram Σ, with an Arian *h*.

2.—Didrachma.

OBVERSE as above, with Arian letter *s* in the field.

REVERSE:—Female figure, to the left, with chaplet and palm-branch.

Monogram, No. 77. 'Ariana Antiqua,' pl. viii., fig. 6.

3.—Didrachma. (145 grs)

OBVERSE:—Azas' horseman, to the right, with whip and the bow fixed behind the saddle.

Monogram, No. 137.

REVERSE:—Dioscuri, standing to the front, leaning on their spears.

ARIAN LEGEND:—*Mâhârajasa Rajadirajasa Mahatasa Ayilishasa.*

Mr. Bayley. Col. Nuthall, Obv. monogram, 137 with *b*, and Rev. 164.

4.—Didrachma. (142 grs.)

OBVERSE as No. 3.

Monogram, 137*a*.

REVERSE:—Single figure, bearded, clothed in skins, to the front; the right hand grasps a spear, the left rests upon the sword hilt.

Monogram, No. 165. Mr. Bayley. Mr. C. M'Leod.

5.—□ Copper.

OBVERSE:—Standing figure, to the front (indistinct), with right arm extended, and mantle on the left.

Monogram, 30*a*.

REVERSE:—Lion, as in Azas' coins.

Monogram, No. 166. A second coin has *mi* (?)

Mr. Bayley. Capt. Robinson.

6.—□ Copper.

OBVERSE:—Azas' horseman, with spear sloped downwards.

REVERSE:—Bull, to the left. Arian legend as in No. 1.

British Museum monogram, 132 with *mi*, and traces of monogram 125*a*.

a)—Plate xvii., fig. 28.

REVERSE:—Bull, to the right.

7.—□ Copper.

OBVERSE:—Azas' horseman.

REVERSE:—Elephant.

ARIAN LEGEND:—*Mâhârajasa Mahatasa Ayilishasa.*

Monogram, variety of No. 124, with *si*.

'Ariana Antiqua,' pl. viii., fig. 7.

8.—□ Copper.

OBVERSE:—Horseman.

REVERSE:—Hercules, seated, with club, and as in Spalyrios' coins. (C *a*.)

ARIAN LEGEND, as in No. 7.

Monogram, No. 134. Mr. Bayley.

And a second piece, 167. Ordinary monogram, No. 134, with Arian *s*, *si*, or *ti*.

9.—□ Copper.

OBVERSE:—Standing figure, to the right, with the right arm extended horizontally, and holding a chaplet.

REVERSE:—Figure in short tunic, with loose veil-like garments around the head, etc.

ARIAN LEGEND, imperfect:— . . . *jasa Mahatasa Ayilishasa.*

Mr. Bayley.

## XXXII. SOTER MEGAS.

1.—○ Copper.

OBVERSE:—Bust of king, with crested helmet, to the left; the right hand holds an arrow.

Monogram, No. 168, with the Arian letters *ti*, in front of the profile.

REVERSE:—Azas' type of horseman, elevating a small object like a cross.

LEGEND:—BAϹIΛЄV BAϹIΛЄVѠN ϹѠTHP MЄГAϹ.

Monogram, No. 168. Mr. Bayley.

'Ariana Antiqua,' pl. ix., figs. 8, 10.

2.—○ Copper. Plate xvii., fig. 26.

OBVERSE:—Bust of king, with rayed head; the right hand holds either a javelin with pennons, or a simple dart.

Monogram, No. 168.

REVERSE:—As above.

Monogram, No. 168. 'Ariana Antiqua,' pl. ix., figs. 11 to 19.

There are numerous subordinate varieties of this type of coin, which it is needless to particularize in this place. But I may notice that the degraded Greek sigmas, which have heretofore usually been rendered by a square Ϲ, are, in these mintages, indifferently interchanged with the equally debased C on the different specimens.

3.—○ Copper. Plate xvii., fig. 23.

OBVERSE:—King on horseback, to the right.

LEGEND:—BACIAEV BACIAЄVѠN CѠTHP MЄГAC.

REVERSE:—A male figure, with flat helmet and fillet, casting incense upon a small altar.

ARIAN LEGEND:—*Máhárajasa Rajadirajasa Mahatasa Tradatasa.*

Monogram, *ti*. 'Ariana Antiqua,' pl. ix., figs. 20, 21, 22.

4.—○ Copper.

OBVERSE:—Head, with fillet, to the right.

Monogram, No. 168.

REVERSE:—Standing figure, to the left, holding a staff or spear in the left hand, and what may possibly be intended for the thunderbolt in the right.

GREEK LEGEND (imperfect). Mr. Bayley.

## XXXII[a]. KADPHISES.

1.—Gold. Unique.

OBVERSE:—King, seated after the Oriental fashion (cross-legged) on clouds. He holds a club in his hand, and small flames ascend from his shoulders; he wears a Scythic cap surmounted by a single-centred trident.

LEGEND:—BACIAEVC ooHMo KAΔΦICHC.

Monogram, 169.

REVERSE:—Siva and his bull (Nandi); flames rise from the divinity's head; he holds a trident in his right hand.

ARIAN LEGEND:—*Máhárajasa Rajadirajasa sarvaloga Imastasa Mahimastasa hapinasasa.*

Monogram, 159. Captain Robinson.

2.—Gold.

OBVERSE:—King, seated on an Eastern throne, with a flower in his right hand. Legend and monogram as above.

REVERSE:—Device as No. 1.

Monogram, ditto.

'Jour. des Sav.,' 1834, pl. fig. 7. 'Ariana Antiqua,' pl. x., fig. 5, and pl. xxi., fig. 17.

I do not propose to enter into any detail of the coins of Kadphises in this place, as they scarcely belong to the Bactrian series. It will be sufficient to refer to the types already figured and described by Prinsep,[1] and the additional specimens engraved in the 'Ariana Antiqua.'[2] It is to be noted that these and other Indo-Scythian coins are known only in gold and copper, the single supposed silver specimen in the E.I.H.[3] having proved to be of copper plated over!

## XXXIII. GONDOPHARES.[4]

1.—○ Copper. Plate xliii., fig. 15.

OBVERSE:—Azas' horseman, to the right.

LEGEND:—BACIΛEωC BACIΛEωN ΓoNΔoΦAPoΥ.

Monogram, No. 170.

REVERSE:—Figure, with trident.

ARIAN LEGEND:—*Mâhâraja Rajaraja Mahatasa Gadapharasa.*[5]

British Museum coin. Monogram, No. 171.

'Ariana Antiqua' (billon coin), pl. v., fig. 16.

[1] [Pl. viii., fig. 4; pl. xxii., figs. 1, 2, 3.]

[2] ['Ariana Antiqua,' pl. x., figs. 7 to 21.]

[3] ['Ariana Antiqua,' pl. xi., fig. 9.]

[4] [An enquiry of considerable interest has been raised with reference to the name preserved on these coins, so long veiled from European intelligence, in virtue of the almost literal identity it bears to the designation of the king mentioned, in certain old church legends, as the ruling potentate of India at the period of the mission of St. Thomas the Apostle. The coincidence in the appellation is certainly remarkable, though there is a defect in the primary authority for the statement, a difficulty in regard to the correspondence of the site of the kingdom, and a doubt as to the needful accordance of the epochs of the legendary and the numismatically-certified monarchs, the latter of whom seems to belong to a date prior to our era; but, for the reconcilement of this last obstacle, there is a fairly open margin afforded by the successional coins, which in themselves suggest the question as to whether the name of Gondophares was not posthumously elevated into the rank of a dynastic title. The following heads of sentences will indicate the leading combinations deposed to by the 'Legenda Aurea,' p. 33:—'Thomas apostolus cum esset apud Cæsaream, apparuit ei dominus dicens: rex Indiæ Gundoferus, etc., p. 35. Post hæc autem apostolus et Abbanes ad regem Indiæ pervenerunt . . . . Gad frater regis, etc., p. 37. Post hoc autem in superiorem Indiam abiit'.—'Jacobi a Voragine Legenda Aurea.' Dresden, 1846. *Cf.* also 'Lombardica Historia' (1490), Kercher; pp. 122 and 91 severally of the French and Latin editions of his 'China,' etc.; also Assemain's erudite rectifications, pp. 30 and 591, vol. iii. (2nd part).]

[5] [The Arian orthography of this name varies considerably, not only in the different mintages of diverse types, but even in pieces having similar standard devices: among the latter, belonging to class No. 1, I note *Gandaphrata—Gudupha*, etc.]

2.—○ Copper.
OBVERSE:—As above.
LEGEND:—BACIΛEωC BACIΛEωN MEΓAΛOΥ ΥNΔOΦEPPOΥ.
REVERSE:—Minerva, armed, to the right.
ARIAN LEGEND:— *Máhárаja Rajadiraja Tradata . . . . Gadapharasa.*
Monogram, No. 134*c* with 172.
Mr. Brereton. 'Ariana Antiqua,' pl. v., fig. 17.

3.—○ Copper.
OBVERSE:—As above.
REVERSE:—Male figure, with spear, to the right.
Monograms, No. 134*c* with 173 (*t* and *phre*), No. 171 with 155*a*.
'Ariana Antiqua,' pl. v., fig. 18.

4.—□ Copper. (Type as in pl. xxviii., fig. 15; and pl. xxxii., fig. 14).
OBVERSE:—King, on horseback; to his front is seen Victory, presenting a chaplet.
LEGEND:—BACIΛEO . . . . . ΦAPOΥ (?). ['Ariana Antiqua' coin, ΦAPOΥ μεΓAΛOΥ ΓONΔA.]
REVERSE:—Centre device, the monogram figured under No. 170, pl. xi*d*.
ARIAN LEGEND:—*Máhá . . . . Dhaga . . . sa Apratihatasa Ja . . . . sa Gudapharasa.*
Monograms, Arian letters, No. 63 and *san*.
Mr. Bayley. 'Ariana Antiqua,' pl. xxi., fig. 16.

5.—○ Copper.[1]
OBVERSE:—Head of king, to the left; the contour similar to the Pakores' busts.
LEGENDS imperfect. B. B., etc.
REVERSE:—Victory, with chaplet.
ARIAN LEGEND:—*Máhárajasa Rajadirajasa Mahatasa Gudaphara . . . . .*
Monogram, *gu*, and an indistinct Arian letter. Mr. Bayley.

6.—○ Copper. Plate xviii., figs. 5–8.
OBVERSE:—Head of king, to the right, greatly barbarised. [THPOC ΥNΔOΦEPP.]
REVERSE:—Victory, as in No. 5.
ARIAN LEGEND:—*Máhárajasa Godapha . sa Tradatasa.*
Mr. Brereton.

7.—○ Copper. Small barbaric coin.
OBVERSE:—Rude filleted head, to the right.
Abbreviated Greek legend, BACI BAC . . . Υ.
REVERSE:—Rude figure of Thessalian Minerva, to the right.
ARIAN LEGEND:—*Rajadirajasa Mahatasa Godapharasa.*
Monogram, Arian *stri* and *há* or *ho*.

## XXXIV. ABDALGASES.

1.—○ Copper.
OBVERSE:—King's bust to the right, as in the Pakores' type.
LEGEND:— . . . . IΛEωC CωTHPOC A . . . .
REVERSE.—Figure of Victory, to the right (of good execution).
ARIAN LEGEND:—*Tradatasa Máhárajasa Abdagaṣasa.* Mr. Brereton.

[1] [There is an interesting coin in the British Museum, brought from India by Captain Hollings, typically connected with the above, which deserves mention in this place.—○ Copper. *Obv.*—Bust of king to the left, wearing the Parthian tiara. Imperfect legend, in corrupt Greek, BACIΛEΥ. *Rev.*—Figure of Victory, as in No. 6. Greek

2.—○ Copper.

OBVERSE:—Azas' horseman, to the right, with flat cap and flowing fillet; hand upraised.

LEGEND, corrupt:—ΒΑΣΙΛΕΥΟΝΤΟΙ ΒΑΣΙΛΕΩΝΤ ΑΒΔΑΓΑΣΟΥ.

Monogram, 170.

A coin in the B. I. gives the name ΑΒΑΛΓΑΣΟΥ. Rev. monogram, 39*b* with 174*b*, etc.

REVERSE:—Erect figure, to the right; head-dress as on the obverse, with spear, hand extended.

ARIAN LEGEND:—*Godophara Bhrada Putrasa Máhárajasa Abdagaṣasa.*

[Coin] 'of Gondophara's brother's son, Máháraja Abdagases.'

Capt. Robinson, 39*b* with Arian monogram, No. 174 (*Sakre* or *Saphre*).

Some of the coins of this series modify the obverse legend. It is usually in corrupt and bungled Greek, and difficult to make sense of; but it clearly accords with the substance conveyed in the Arian legend above transcribed, in defining the nepotal relationship of Abdalgases. A collation of three specimens (B. I.) produces the following imperfect version—ΒΑΣΙΛΕΥΑ ΠΑΔΑ ΓΥΝΔΙΦΕΡΟ ΑΔΕΛΦΙΔΕΩΣ. The Reverse legend is also uncertain in the different specimens, adding, at times, the titles of *Tradatasa* and *Dhramiasa* after the Máháraja. Monogram, 176.

3.—○ Copper. Similar types.

LEGENDS, imperfect [ΙΟΙΦΕΡΟ ΑΔΕΛΦΙ] with the addition of the title of *Tradatasa* before the name on the reverse. Mr. Brereton.

4.—○ Copper.

OBVERSE:—Horseman, to the left.

REVERSE:—Figure as in No. 1, without the cap. Major Cunningham.

a)—Small coin. Mr. Bayley.

5.—○ Copper.

OBVERSE:—As No. 2. Monogram, No. 145 with *t*.

REVERSE:—Erect figure, holding a small statue of Victory, to the left.

Monogram, No. 134*c*, with Greek ΔΡ and Bactrian *t*. Mr. Bayley.

## SUB-ABDAGASES SASAN.

1.—○ Copper.

OBVERSE:—Horseman, as in No. 2. Legend imperfect.

Monogram, No. 170, with *p*. My 'Cabinet,' 170, and *b*.

REVERSE:—Figure as above, No. 2.

ARIAN LEGEND:—*Máhárajasa Mahatasa Tradatasa* . . . . .[1] *Godaphrasa Sasasa.*

Monogram, No. 159, with ٦ and small letters, *p*, *sh*, etc, in the field. Mr. Bayley, *p*, *pi*, etc. 'Ariana Antiqua,' pl. v., fig. 20.

legend imperfect, but the name or title reads clearly CANABAPOY. *Cf.* Ælii Spartiani—Lugduni Bat. MDCLXI, p. 23; and Kercher, pp. 80, French edit., 59, Latin edit. *Psammossires?*

[1] [Major Cunningham renders the doubtful word here omitted as *Deva-hadasa* (Sanskrit, देव हृद्य *Deva-hridya*), God-hearted, Θεοτρόπος. 'Jour. A. Soc. Beng.,' 1854, p. 713.]

2.—⊙ Copper.

OBVERSE :—Azas' horseman.

REVERSE :—Jupiter, holding a figure of Victory, to the left.

ARIAN LEGEND :—*Máhárajasa Saccha Dha(mapidasa) Sasasa* [Cunningham].

Monogram, No. 134*c*, with Greek ΔΡ and Arian *t*.

'Ariana Antiqua,' pl. v., figs. 19, 20.

## XXXV. ARSACES.

I extract the following notice of the coins of Arsaces from Major Cunningham's paper in the 'Jour. As. Soc. Beng.,' vol. xi., 1842, p. 135.

1.—⊙ Copper.

OBVERSE :—A horseman, to the right.

LEGEND :—ΒΑCΙΛΕVΟΝΤΟC ΒΑCΙΛΕΩΝ ΔΙΚΑΙΟΥ ΑΡCΑΚΟΥ.

REVERSE :—Type obliterated.

ARIAN LEGEND :—*Máhárajasa Rajarajasa Mahatasa Ashshakasa Tradatasa.*

2.—○ Copper.

OBVERSE :—A horseman, to the right.

LEGEND, imperfect ;—ΒΑΣΙ . . ΟΥ ΑΡΣΑΚΟΥ.

REVERSE :—Male figure, to the left, holding a small figure in his right hand.

ARIAN LEGEND :—*Máhárajarajasa . . . . A(shshakasa).*

## XXXVI. PAKORES.

1.—○ Copper.

OBVERSE :—Bearded head, to the left; the hair is elaborately curled and arranged after the Persian fashion.

LEGEND :—ΒΑCΙΛΕΥC ΒΑCΙΛεων ΠΑΚοΡΗC.

REVERSE :—Victory with chaplet, to the right.

ARIAN LEGEND :—*Máhárajasa Rajadirajasa Mahatasa Pakurasa.*

Monograms, Nos. 177, 178, composed of Bactrian letters, with the additional foot-stroke peculiar to the style of writing in use on these coins.

'Jour. As. Soc. Beng.,' vol. xi., pl. fig. 11.

## XXXVIII. ORTHAGNES.

1.—⊙ Copper.

OBVERSE :—Head of king, to the left; the hair is arranged after the Persian fashion on the Pakores' device.

LEGEND (corrupt) :—ΒΑCΙΛΕΥC ΒΑCΙΛΕΩΝ ΜΕΓΑC οΡΘΑΓΝΗC.

REVERSE :—Victory, to the right, holding out a fillet.

LEGEND (imperfect) :—(*Máhárajasa ?*) *Mahatasa Gudupharasa* . . . .

British Museum. Bactrian monograms, *gu* and *go*.

## COINS AND RELICS FROM BACTRIA.

[Article XXI. completes the series of James Prinsep's original essays. The subjoined paper by his brother, Mr. H. T. Prinsep, is reproduced from the 'Journal of the Asiatic Society of Bengal,' December, 1838, as introductory to, and partially illustrative of, my author's latest artistic contribution to Indian numismatics,—an engraving which he himself was not spared to comment on in the text of the Journal for whose pages it was designed.[1]]

[1] [The severance of this connexion, at the time deemed only temporary, is recorded in the subjoined proceeding of the 'Asiatic Society of Bengal,' which, however intentionally complimentary, does but scant justice to the position James Prinsep achieved for the Society itself, in association with the journal of which he is here recognised as the editor]:—

Extract from the proceedings of the 'Asiatic Society of Bengal,' Wednesday evening, the 14th November, 1838. The Hon. Sir Edward Ryan, President, in the chair.—Before proceeding to the general business of the meeting, the President rose and stated that he held in his hand a letter from the Secretary, Mr. James Prinsep, the substance of which must be a source of deep regret to every member of the Society, for every one must feel the loss the Society had suffered in the departure of its Secretary, Mr. James Prinsep. He assured the meeting, however, and he spoke on the authority of a conversation he had with Mr. Prinsep, before his departure, that this gentleman's absence from India would be but for a short period, and that on his return he would be ready to take the same interest, and to display the same zeal and anxiety, which had so honorably distinguished his discharge of the important duties he had undertaken in connexion with the Society. The President said that the objects of the Society had, under Mr. Prinsep's able superintendence, been prosecuted with a vigour which had added largely to its credit and reputation; and that the results produced in every department of science and literature, for which the Society was indebted chiefly to its Secretary's activity and varied powers, had sustained its character in a manner rivalling the periods when it derived renown from the labours of a Jones, a Colebrooke, and a Wilson. The President took occasion to add, that, in the time of Mr. James Prinsep, and on his proposition, the name of the Society had been associated with a monthly periodical, established by the late Captain Herbert, originally under the name of 'Gleanings in Science.' The work was afterwards extended and ably conducted by Mr. Prinsep himself; and at his suggestion it was resolved, in 1831, that so long as this periodical should be conducted by a Secretary of the Society, it should bear the title of 'Journal of the Asiatic Society;' under that name it had been since continued by Mr. Prinsep with very distinguished success to the present day. The Society had no property in the 'Journal,' and no right to prevent Mr. Prinsep from separating it again from the Society, and conducting it on his own account; but he had no such intention. He (Sir E. Ryan) had ascertained that Mr. James Prinsep had made arrangements for its being continued to the end of the present year from materials in hand; and after that he meant that *his* series should be closed; but he had no objection to the Society's continuing the periodical by the same name, under other management, as a concern quite inde-

It has been already announced in the pages of this Journal, that the extensive collections of coins and other relics made by Mr. Masson, by Sir Alexander Burnes, and Dr. Lord, were on their way to Calcutta, and were likely to fall shortly under the examination of the Editor. He felt it as a great compliment that was paid to his efforts to restore the lost portions of Indian and Bactrian history by means of the coins and inscriptions still extant in the language and with the superscriptions and dates of the rájas of those times, that collectors in all parts of India were in the habit of submitting to his inspection whatever they lighted upon as unusual, and sought his reading and interpretation of the legends, emblems, and inscriptions, which baffled the learning and ingenuity of the pandits and antiquarians of the vicinity. As a consequence of the happy discoveries made by him in this line, coins and transcripts of inscriptions came in from all quarters, from Assam and Ava to Bokhára and Sindh, and from Ceylon northward to Nepal. The possession of the rich store of materials thus accumulated gave facilities

pendent. Now, he (the President) believed that all the members of the Society would regret exceedingly that a periodical so established, and which had acquired such credit and consideration, should be discontinued. He trusted that it would be resumed by Mr. J. Prinsep himself when he returned to India; but, in the meantime, he should submit to the meeting the propriety of taking into consideration the possibility of making some arrangement to carry it on during Mr. Prinsep's absence. Having premised thus much, the President stated that he should read to the meeting Mr. James Prinsep's letter, placing the situation of Secretary at their disposal: but, as he had no doubt it would be the unanimous feeling of the meeting to desire to retain Mr. Prinsep in official connection with the Society, he should not consider this letter as an absolute resignation, but should propose a resolution, and submit arrangements founded upon it, which would enable Mr. Prinsep to resume the office on his return to India. The President then read the following letter:—

*To the Hon. Sir* EDWARD RYAN, *Kt., President of the Asiatic Society.*

HON. SIR,

Being compelled by ill-health to proceed to sea and eventually to Europe, I have taken my passage on board the 'Herefordshire,' with the intention of being absent from the country for two or perhaps three years. I am thus under the necessity of placing at the disposal of the Society the situation of its Secretary, which I have filled for five years.

It is with great reluctance and regret that I thus separate myself from a body with whom I have been associated in labours of much interest and utility, whose favour has encouraged my zeal, and through whose credit and reputation in the world I have obtained the means of making generally known my own humble efforts in the cause of science, and my not unsuccessful endeavours to explore the antiquities of the country to whose service we are devoted.

But the disability of sickness is an accident to which we are all liable, and from which there is no resource, but in temporary departure to a better climate. I am thus compelled to leave my incomplete labours to be perfected by others, and to relinquish the place I have held in the Society, that provision may be made for its competent discharge under the failure of my own power of longer rendering useful service.

I have the honour to be, etc.

*1st November*, 1838. (Signed) JAMES PRINSEP.

Proposed by the President, seconded by Mr. Curnin, and unanimously resolved: That the resignation of Mr. James Prinsep be not accepted; but the Society hope that he will return to resume the situation of Secretary, which he had filled so much to the credit of the Society for a period of five years.—Resolved; That the President communicate to Mr. James Prinsep the desire of the Society, that he shall not consider himself as having vacated the situation of Secretary; and express the hope that, on his return to India, he will resume the situation of Secretary.

of comparison and collation which were doubtless a main cause of his success; but the study and exertions required for the satisfaction of these numerous references to his individual skill, although entered upon with a zeal participated only by those who have achieved much, and feel that there is yet more within their reach which ought to be the result of their own discoveries, were too severe for the climate of India, and the Editor's robust constitution sunk at last under the incessant labour and close attention given to these favorite studies at the very moment when the richest collection of inscriptions, coins, and relics, that had ever been got together in India, were actually on their way to Calcutta, as materials for maturing the results he had achieved. The collections of Mr. Masson were forwarded from Bombay in the John Adam, which reached Calcutta only in the course of the past December. There are of these coins from four to six thousand, besides the contents of several topes, and casts of figures of Budh, with various other remains of the period antecedent to the Muhammadan invasion of Bactria and Afghanistan. The whole of this collection was by order of Government laid upon the table of the Asiatic Society at the meeting of January, 1839; but the members present felt that, in the absence of their late Secretary, and likewise of Capt. Cunningham, Mr. V. Tregear, and Colonel Stacy, there were no persons in Calcutta to whom the examination, arrangement, and report upon the coins and relics could be committed with confidence. They came therefore to the unanimous resolution to recommend their being forwarded without delay to England, where the Honorable Court would have the opportunity of submitting them to the inspection of the late Secretary of the Asiatic Society, jointly with Dr. Wilson, the librarian at the East India House, and so the ends of science and of antiquarian research would be most effectually answered.

The care of this magnificent collection, which is large enough to supply all the museums in Europe, has been kindly undertaken by Mr. Cracroft, a very zealous member of the Asiatic Society, and there is ground for hoping that under his superintendence a catalogue may yet be made before he takes his final departure for England. The articles have come round in bags without any separate lists, and in one bag there are about two thousand copper coins.

But, independently of Mr. Masson's collection, another numbered by thousands has been brought to Calcutta by Dr. McLeod, the Inspector General of Hospitals to Her Majesty's forces in India. This consists partly of coins of all metals, but there are also several seals and gems of different stones cut with a great variety of emblems and devices. All these are the property of Sir A. Burnes, and have arrived

for deposit and custody as well as for inspection; they are therefore still available for the curious, and will continue so until Sir A. Burnes shall send instructions as to their disposal. We cannot ourselves undertake the particular examination of these relics so as to give the detailed description they deserve. A selection from the coins had, however, previously been made at Simla, and those deemed most curious being forwarded by the dawk arrived fortunately before the departure of our Editor. Amongst them is that most curious coin of Dr. Lord, with the head of Eucratides on one side, and of both his parents on the other, a drawing of which is exhibited in plate xlii. From the other selected coins thus transmitted, a plate was prepared by the Editor, which was intended to be illustrative of an article he designed giving in our last October number. The plate remains, and we attach it to this article, that the curious who have followed our Editor to the length of his past researches may see the objects which he deemed worthy of fresh illustration in the field of Indo-Bactrian numismatology. If the 'Herefordshire,' the ship in which he took passage, had touched at Madras, or had put into Mauritius, or had met a vessel at sea, we might have hoped for the comments promised on this, as on two other plates which we also intend to give, and shall separately refer to. But the time approaches when the issue of the last number of our series will be expected, and we can no longer defer the publication, under the doubtful expectation of receiving the desiderated paper from the Cape of Good Hope. Of the coins and gems therefore in Sir Alexander Burnes's collection we can at present make no use, but we hold them in deposit for the examination of others, and to await his further instructions. We must be content at present to give the plate referred to, which it will be seen is numbered xliii., together with such brief reading of the names, as a Tyro of Indian numismatics might be expected with the aid of the alphabets to supply. The plate is of Indo-Bactrian coins of date antecedent to the introduction of Grecian art, with the Grecian alphabet, into the mints of that country. The legends are in the ancient No. 1 character of the then universal Pálí language, with Bactrian characters in some instances on the obverse, or intermixed. The names and emblems on these coins are well worth the study of the learned.

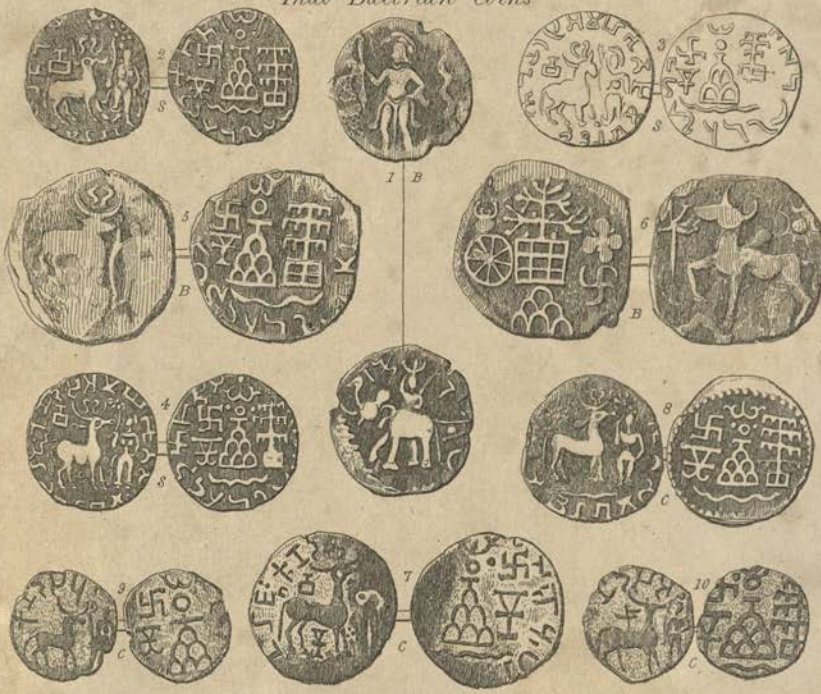
Along with Sir A. Burnes's coins, Dr. McLeod brought to Calcutta a very singular relic obtained by Dr. Lord at Badakhshán, and which is, we believe, destined for the British Museum. The relic in question is an ancient patera of silver, embossed in the interior in very high relief, and representing, with all the usual adjuncts of classic mythology, the procession of Bacchus. The god himself sits in a car drawn by two

harnessed females with a drinking cup in his hand. A fat infant, Silenus, stands in front, and there is a female figure sitting on the after corner of the car, which, from its disproportionate size, we imagine to be the carved elbow of the seat on which the god reclines. There are also two winged cupids in attendance, one flying with a wand in his hand, to which a fillet is attached, the other end of which is held by the infant Silenus; and the other on the foreground behind the wheel of the car, as if employed in pushing it on. The car is followed by a dancing Hercules, distinguishable by the club and lion skin. The heads of this figure and of the Bacchus are both wanting, owing probably to their having been of gold, or thought so, while the rest of the patera, being only of silver gilt, has escaped similar violation. The gilding, however, is mostly worn away from long use, and in one part the side of the cup is actually worn through. Independently of the circumstance of the main figure being represented with a cup in hand, its identity with the Grecian Bacchus is proved by the vines circumpendent, and by the figure of a tiger standing prominently out in the fore-ground and drinking out of a wine jar.

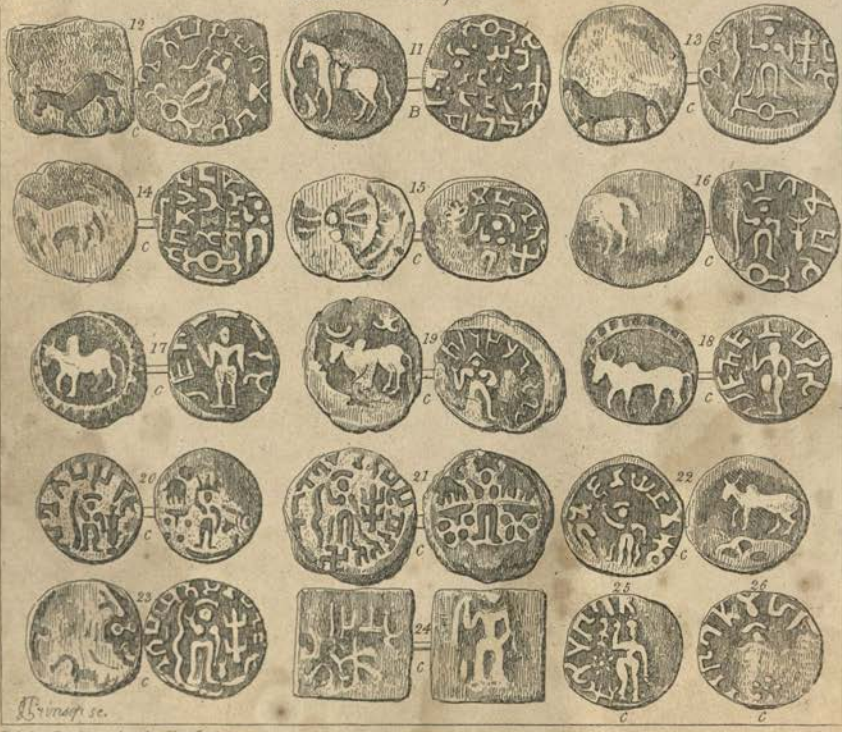
This patera is the property of Dr. Lord, who is also the fortunate owner of the double-headed coin of Eucratides, the original apparently from which the plate of a similar coin is given in Dr. Vincent's 'Periplus;' but the double head is there represented as being on both sides of the coin. With a liberality deserving of particular notice, both these unique relics have been gratuitously appropriated by the finder, or are intended to be so, in the manner deemed by him most conducive to the ends of science, Dr. Lord not desiring to retain them as isolated trophies of his own good fortune in the field of research and discovery.

I fear we must not look upon this piece of plate as affording evidence of the state of the arts in Badakhshán, where it was found, at any particular epoch. That it is of high antiquity is quite apparent from the condition of the metal, as well as from the design; but in the Periplus of the Erythrean sea, published amongst Arian's works, it is distinctly stated that *ἀργυρώματα, i.e.* articles of silver plate, were a staple import from the west, for exchange against the productions of India. At Minnagarh, upon the Indus, it is further stated by the author of that treatise that he himself presented to the rája *βαρύτιμα ἀργυρώματα*, valuable pieces of plate, in order to secure his favor, and the grant of certain privileges of trade. There is thus reason to believe that the patera must have been brought from Greece or Asia Minor, and either presented in like manner, or sold to some sovereign of Bactria, by a merchant desiring similar privileges of trade in that country. That it has been in use for centuries is evident from the

## *Indo-Bactrian Coins*



## *Buddhist Satrap Coins.*



Pub by Stephen Austin, Hertford.

worn condition it now presents; but for how many it was in use, and for how many it lay treasured in royal or other repositories, is more than may now be conjectured.

## INDO-BACTRIAN COINS.

Specification of coins in plate xliv.

1. OBVERSE: Armed figure standing with a club or spear; no inscription.
   REVERSE: Elephant with rider. Bactrian inscription, *Rajasa*; rest not decipherable.
2. OBVERSE: Woman and deer, with inscription not legible: emblem, etc.
   REVERSE: Tree and mountain; with emblems. [See *ante*, vol. i., p. 201.]
3. OBVERSE: Man and bull; same emblem as No. 2; and *Mahárájasa Mahabhatasa* in old Pálí clearly legible, but the name to the left baffles us.
   REVERSE: Same device and emblems as No. 2, and *Mahárájasa* clearly legible in Bactrian at the bottom.
4. OBVERSE: Same device as No. 2, and same emblem; *Rajna Rajasa Maghadatasa* in old Pálí.
   REVERSE: Same device and emblems as No. 2; *Mahárájasa* in Bactrian; the rest not legible.
5. A larger coin; the same device on both sides as No. 3; obverse defaced.
   REVERSE: *Mahárájasa* in Bactrian characters.
6. OBVERSE: Bull and emblem; no letters.
   REVERSE: Same emblems as Nos. 2, 3, and 4, with addition of a wheel: very peculiar.
7. OBVERSE: Deer and man, with emblems; *Rajna Kunandasa* in old Pálí.
   REVERSE: Same as Nos. 2, 3, 4, etc.
8. OBVERSE: Deer and woman; *Mahárájasa* in Pálí.
   REVERSE: Same as No 2; no inscription.
9. OBVERSE: Deer and man; *Kunandasya* in Pálí.
   REVERSE: Same as No. 2.
10. Same precisely. Pálí inscription, *Nandasá*, the last letter being an initial 𑀅 *á*.

## BUDDHIST SATRAP COINS.

11. OBVERSE: Horse caparisoned.
    REVERSE: *Rajasa*, in Bactrian, with various marks.
12. OBVERSE: Horse.
    REVERSE: Standing figure with bow. Inscription in Pálí, *Sarba tápasa patamapasa.* [*Khatrapasa P(H?)agámashasa.*]
13. The same indistinct.
14. OBVERSE: The same worn.
    REVERSE. Inscription in lines. *Tamapasa* legible in Pálí. [*Khatrapasa pagámasa P(H?)agámashasa.*]
15. Nothing distinct.
16. OBVERSE: Horse's tail and hind quarter.
    REVERSE: Figure standing. *Lagámapasa* in Pálí.
17, 18, 19. OBVERSE: Bull.
    REVERSE: Standing figure, with inscription *Rajnapadasa*. Centre one in Bactrian.

20. OBVERSE: Standing figure. Páli inscription, *Paghugapasa.* [*Khatapasa Raja . .* ]
REVERSE: Figure. No inscription.
21. Nothing made out.
22. OBVERSE: Figure in speaking attitude. *Rajna Raghunám*
23, 24, 25. Not deciphered.

N.B.—These latter are classified as of the Satrap group—first, because of the title Rája or Mahárája not being found in any of them; secondly, because of the names having so evidently an ancient Persian aspect; and lastly, because of the horse emblem, which probably had its origin in the circumstances which attended the accession of Gushtasp, Darius Hystaspes.

END OF ESSAYS.

# USEFUL TABLES,

ILLUSTRATIVE OF

THE COINS, WEIGHTS, AND MEASURES

OF

# BRITISH INDIA;

TOGETHER WITH

CHRONOLOGICAL TABLES AND GENEALOGICAL LISTS,

HAVING REFERENCE TO

INDIA AND OTHER KINGDOMS OF ASIA.


BY THE LATE

JAMES PRINSEP, F.R.S.,

SECRETARY TO THE ASIATIC SOCIETY OF BENGAL.


EDITED,

WITH NOTES, AND ADDITIONAL MATTER,

BY


EDWARD THOMAS,

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LONDON:

JOHN MURRAY, ALBEMARLE STREET.

1858.

# PREFACE.

In putting forth this New Edition of Prinsep's Useful Tables, I may confidently appeal to the sterling value of the work, and the appreciation with which it has previously been received by the public in India, as evinced in reprints, partial and entire, issued at Calcutta and elsewhere.

My task as Editor has been limited to bringing up the Monetary Tables to the latest possible date, the occasional insertion of Notes, and the incorporation of such additional Dynastic Lists as chanced to be accessible in this country. The orthography of the Oriental names has usually been reproduced literatim after the original printed text, wherein they are found to vary to the extent that might have been anticipated consequent on the assemblage of the component materials from the works of various European commentators, who each followed his own method of transliteration, and who, for the most part, wrote before we had arrived at even the present indeterminate stage in the system of the transcription of Eastern tongues which Sir William Jones so meritoriously inaugurated.

# CONTENTS AND TABLES.


| | PAGE |
|---|---|
| Monetary System, Description, Weight, and Assay of Coins | 1 |
| [Note on Relative Value of Gold and Silver in India during the 16th century] | 5 |
| Table of Coinage Duty and Refinage Charge | 9 |
| Table of the Intrinsic or Assay Produce of Silver Bullion | 10 |
| Table of the Intrinsic or Assay Produce of Gold Bullion | 11 |
| Table for reducing 'Anás and Pá'is into decimal parts of a Rupee | 12 |
| Table of Exchange of Sikká Rupee in Shillings | 14 |
| Table of Exchange of Farrukhábád, etc., Rupee in ditto | 14 |
| Table of Exchange of Gold Muhr in Sovereigns and Shillings | 15 |
| Exchanges with America, France, and China | 15 |
| Hindú Monetary System | 17 |
| Musalmán ditto; Modern Native Coinage | 19 |
| [Note on the weight of the Másha in Shír Sháh's time] | 20 |
| [Akbar's Mint Cities from the original Persian text of Abúl-fazl] | 23 |
| Coinage of Nepál | 31 |
| Chinese Currency | 33 |
| Ava Specie | 34 |
| Company's Established Exchange for certain Rupees | 37 |
| Native Copper Coins | 38 |
| Symbols on Sháh A'álam Coins | 39 |
| Tables of Bullion Imported, Exported, and Minted | 41 |
| Table of the Gold Coins of India | 43 |
| Supplement to ditto, containing a detail of the Legends, and the assay weight of Gold Coins of Dihlí Emperors | 45 |
| [New Coins of this series] | 49 |
| Supplementary Table of Indian Gold Coins | 50 |
| Table of the Silver Coins of India | 52 |
| Assay of Bullion generally, brought to the Calcutta Mint | 61 |
| Assay of Ava Silver Cakes | 61 |
| Table of Copper Coins of India | 62 |

PAGE
Symbols, etc., on Modern Indian Coins ..... 64
Catalogue of ditto ..... 67
[Note on the History of the Gold and Silver Currencies of India] ..... 69
Table of the Coinages issued from the Calcutta Mint from 1801–2 to 1832–3 ... 80
Table of the Silver Coinage of the Benáres, Farrukhábád, and Ságar Mints..... 81
[Table of the value of Gold and Silver coined in the Mints of Calcutta, Madras, and Bombay, from 1833–4 to 1854–5] ..... 81
Table of Imports and Exports of Treasure (Gold and Silver) in each of the Presidencies of India, from 1813–14 to 1854–55.....82—83
[Proportion of Gold and Silver Imported and Exported from 1846–7 to 1853–4] 83
[Proportion of Bullion absorbed by each Presidency during the eight years in question] ..... 84
[Abstract of Imports and Exports of Goods and Bullion for five years ending 1854–5] ..... 84
[Receipts by East India Company in England in advance on account of Railways in India] ..... 86
[Silver Bullion received into the Mints of Calcutta, Madras, and Bombay, from 1833–4 to 1854–5] ..... 88
[Review of preceding returns]..... 89
[Absorption of Bullion in India not unreasonable in its amount]..... 90
[Suggested Gold Currency; proposition for a Paper ditto] ..... 91
[Weights and Measures connected with Indian Coinages, extracted from Sir H. M. Elliot's 'Glossary of Indian Terms']..... 92

British Indian Weights and Measures..... 95
Scheme of Indian Standard and Man Weights ..... 96
Table of the Correspondence of English and Indian Assay Weights ..... 97
Table of Comparison of the Tolá and Man with the Gold and Silver, or Troy Weights, of other Countries ..... 98
Table for the Mutual Conversion of Tolás and Pounds Troy ..... 99
Table for Converting New Bazar Mans (or Maunds), Sers, and Chhatáks, into Avoirdupois Pounds, and Decimals..... 101
Table for the Conversion of Mans (or Maunds) into Tons, Hundredweights, and Pounds ..... 102
Table for Converting Avoirdupois Weights into British Indian Weights ... 102
Table for the Mutual Conversion of Tolás and old Sikka Weight of Bengal 103
Table for the Conversion of Bengal Factory Weights into New Standard Mans and Decimals ..... 105

PAGE

Table for the Conversion of values quoted in Current Rupees per Factory Maund, Ser, or Chhaták, into their equivalents in Sikká or Farrukhábád Rupees, per New Standard (or Bázár) Weights ..... 106

Table for the Mutual Conversion of Bengal, Madras, and Bombay Mans ... 108

Table for Converting Sers and Chhatáks into Decimals of a Man, and *vice versâ* ..... 108

General Table of Indian Weights ..... 109

Origin of the Present Table of Indian Weights..... 111

Table of Correspondence of English Imperial Measures with Tolás, Sers, and Mans, of India ..... 113

Table of the Commercial Weights of India, and of other trading places in Asia, compared with the British Indian Unit of Weight, and with the Avoirdupois system of England ..... 115

Linear Measures ..... 122

Ancient Gaz Measures enumerated in the 'Ayín-i Akbarí' ..... 123

Table of Linear and Square Measures of India ..... 127

[Extracts from Sir H. M. Elliot's work referring to Linear Measures] ..... 129

INDIAN CHRONOLOGICAL TABLES ..... 131

Eras of Ancient and Modern Times ..... 132

The Roman Year ..... 133

The Julian Reformation of the Kalendar—The Olympiads ..... 134

The Christian Era, Old and New Style ..... 136

The Era of Constantinople—Eras of Antioch and Alexandria ..... 137

The Abyssinian Era—The Jewish Era ..... 138

The Era of Nabonassar ..... 139

The Egyptian Era—The Julian Period—The Era of Dioclesian, called also the Era of Martyrs ..... 140

The Grecian Era, or Era of the Seleucides..... 141

The Death of Alexander the Great—The Era of Tyre—The Cesarean Era of Antioch—The Era of Abraham—The Spanish Era, or Era of the Cæsars—The Era of Yezdegird III., or the Persian Era..... 142

The Era of the Armenians—The French Revolutionary Calendar..... 143

The Mahometan Era, or Era of the Hegira ..... 144

The Chinese ..... 145

Tartar Dynasty—The Japanese ..... 147

INDIAN CHRONOLOGY—

1.—Solar or Sidereal Year ..... 148

PAGE

TABLE I.—The order and names in the Sanskrit, Hindí, and Tamil Languages of the Signs, Months and Lunar Mansions... 150

II.—Days of the Week, with their Synonyms in some other Languages ..... 151

III.—General view of the different Hindú Planetary Systems ... 153

Eras dependent on the Solar Year ..... 153

2.—Hindú Luni-solar Year ..... 154

Era of Vikramáditya..... 157

The Balabhi and Siva Sinha Eras ..... 158

3.—Years numbered by Cycles—Era of Parasuráma—The Grahaparivritti Cycle of Ninety Years ..... 158

The Vrihaspati-chakra, or 'Cycle of Jupiter' ..... 159

Tibetan Kalendar ..... 160

TABLE IV.—Names and Numbers of the Vrihaspati-Chakra, or Sixty Years' Cycle of Jupiter, in Sanskrit, Tibetan, and Chinese ..... 163

Era of Buddha, used in Ceylon, Ava, Pegu, Siam, etc..... 164

Jain Eras ..... 165

Burmese Eras—Newár Era of Nipál ..... 166

[Extracts from Albirúní, regarding Indian Cycles, etc.] ..... ..... 166

4.—Eras derived from the Hijra—Faṣlí, or Harvest Years..... 168

Faṣlí Era of the Dakhan ..... 170

The Táríkh Iláhí, or Era of Akbar—The Shahúr (Vulgò Shuhoor), or Soor Era of Mahárâshtra..... 171

Jalús Years ..... 172

Ráj-Abishek Era of the Marâthas—Recapitulation ..... 173

Tabular view of Eras used in India, with the equation for converting them into Christian Dates ..... 174

Directions for using the Chronological Tables—Hijra Kalendar..... 175

Hindú Solar, or Sidereal Kalendar—Festivals ..... 176

Luni-Solar Kalendar..... 177

Rules for Intercalation..... 178

Lunar Festivals—To convert Samvat into Ṣáka Dates—Cycles ..... 179

Rules for Dates to which the Tables do not extend ..... 180

Samvat and Faṣlí Dates anterior to the Tables ..... 181

TABLE V.—Muhammadan Lunar Year ..... 185

VI.—Ahargana Chandramana, or Luni-solar Periods ..... 186

VII.—Hindú Luni-solar Year ..... 187

VIII.—Solar Ahargana, or lapsed Periods..... ..... 188

PAGE

TABLE IX.—Epochs of Hindú Solar Years in European Dates 188

X.—Hindú Solar or Sidereal Year..... 189

XI.—To find the Day of the Week for any Date from 5000 B.C. to 2700 A.D. ..... 190

XII.—Christian ordinary Solar Year ..... 191

XIII.—Of Correspondence between the Hijra and the Julian and Gregorian Kalendars of Europe, showing the first day of each year of the Hijra Kalendar..... 193

XIV.—Chronological Eras of the Hindús—Part I. Hindú Sidereal Years ..... 201

Part II. Luni-solar Years ..... 207

[Gumpach's corresponding Hijra Dates].. ..... ..... 213

GENEALOGICAL TABLES—

Correction of Epochs..... ..... 216-217

Utility of Coins and Inscriptions..... 219

Erroneous equation of Samvat Era..... 223

TABLE XV.—Hindú Theogony..... 227

XVI.—Paurâṇic Genealogies—Descendants of Swáyambhuva ..... 231

[Prof. Wilson's opinion of the date and authenticity of the 'Bhágavata Puráṇa']..... 231

XVII.—The Surya-vansa, or Solar Dynasty ..... 232

[Note on 'Vishṇu Puráṇa] ..... 234

XVIII.—Chandra-vansa, Indu-vansa, or Lunar Race ..... 236

XIX.—Pandu Dynasty of Indraprastha, or Dihlí ..... 237

XX.—Kings of Magadhá, or Central India ..... 239

XXI.—Andhra, or Vrispala Dynasty, of Andhra (Orissa?) or Telingana 241

XXII.—Rájas of Kashmír, of the Line of Kuru in the Lunar Race ... 241

[Introductory notice on the Chronology of the several Dynasties, together with Wilson, Troyer, and Cunningham's Dates] ... 241

[Notice of the Jálandhara Inscription by Prof. Wilson]..... 245

XXIII.—Chohán, or Chahumán, Dynasty at Ajmír, Dihlí, and afterwards Kotah and Bundi ..... 247

XXIV.—Haravati, or Harautí, Branch of the Chohan Dynasty ..... 248

XXV.—Rájas of Malwa ..... 249

[Inscription from Oudayapúr] ..... 252

XXVI.—The Balabhi, Balhara, or Bala-rais Dynasty of Saurâshtra (Surát and Gujarát) ..... ..... 252

PAGE
[Dr. Stevenson's Dates from the Western Cave Inscriptions]... 253
TABLE XXVII.—The Anhulwára Dynasty of Gujarát ..... 255
XXVIII.—Ránas of Mewár ..... 256
XXIX.—Rahtor Dynasty of Kanauj ..... 258
XXX.—Márwár or Jodhpur ..... 259
XXXI.—The Bikaner Ráj ..... 259
XXXII.—Ránas of Amber, or Dund'hár ..... 259
[Shekáwatí Inscription] ..... 260
XXXIII.—Raos of Jesalmer ..... 260
[Col. Sleeman's Gurha Mundala Rájas] ..... 261
[Inscriptions from Chhatarpur, Kumbhi, and Multai] ..... 264
XXXIV.—Orissa, Or-Desa, or Atkala-Desa ..... 266
XXXV.—Rájas of Nepál ..... 268
XXXVI.—Rájas of Samangarha, or Simroun, in the Tarái, south of Nepál ..... 271
XXXVII.—Rájas of Bengal ..... 271
XXXVIII.—Rájas of Assam, anciently Kamrup ..... 273
XXXIX.—Rájas of Manípur, Mièthiè, or Moglí ..... 274
XL.—The Narapati, or Sholan Dynasty of Karnátá, Dravira, and the Southern portion of the Peninsula ..... 275
XLI.—Belál Rájas of the Karnátá ..... 276
A.—[Mr. Elliot's Inscriptions from Southern Máhratta country]... 276
B.—[Mr. Wathen's Inscriptions concerning the Chálukya Dynasty] 278
XLII.—Adeva Rájas of Tuluva, Andhra, or Telingána ..... 278
XLIII.—Rájas of Chola (Chola-mandeloor, Coromandel) ..... 279
XLIV.—Rájas of Chera or Konga (comprehending Salem and Coimbetore) 279
XLV.—Pandyan Dynasty of Mádura ..... 280
XLVI.—Rájas of Vijayanagar ..... 281
XLVII.—Rájas of Maisur (Maheshwar or Mysore) ..... 281
XLVIII.—Paligar Dynasty of Trichinapali ..... 282
XLIX.—Valuguti Rájas of Venkatagiri, or Kálimalé ..... 282
[Introductory Notice of the List of Indian Dynasties, compiled from Ferishtah] ..... 283
L.—Indian Dynasties, according to Ferishtah ..... 283
LI.—Máhratta Governments ..... 285
LII.—Síkh Government of Láhore ..... 287
LIII.—Chinese, Japanese, and Buddhist Chronology ..... 287
LIV.—Buddhist Chronology of Tibet ..... 289

PAGE

TABLE LV.—Kings of Tibet, to the subdivision of the country in the tenth century ..... 290

LVI.—Burmese Chronological Table ..... 291

LVII.—Chiefs of Labong and Zimmay ..... 294

LVIII.—Sovereigns of Ceylon ..... 295

LIX.—Greek Dynasties in Asia ..... 299

LIX*a*.—Arsacidan Kings of Armenia ..... 300

LX.—Mythological Period of Persian History ..... 300

LXI.—Kings of Persia, of the Sassanian Race ..... 301

LXII.—Khalifs, Vicegerents or Successors of Mahomed or Muhammad bin Abd-allah ..... 302

C.—[Arab Governors of Khurásán] ..... 304

D.—[Táherides] ..... 304

E.—[Saffaris] ..... 304

LXIII.—Sámánian or Sámání Dynasty of Bukhárá, Khurasan, and Persia 304

LXIV.—[The Ghazni Dynasty] ..... 305

LXV.—Sultáns of the Seljúḳ Dynasty ..... 307

LXVI.—Atabegs of Iráḳ ..... 308

LXVII.—Turcoman Ortokite Princes ..... 308

LXVIII.—The Mogol or Moghul Empire of Tartary ..... 308

LXIX.—Moghul-Tartar or Il-Khánian Dynasty of Persia ..... 309

LXX.—Moghul Sultáns of Khorásán ..... 309

LXXI.—Kings of Persia of the Sophi, Súfi, or Ṣafi Race ..... 309

LXXII.—List of the Patán, Afghan, or Ghori Sultans of Hindústán ..... 310

LXXIII.—Patan or Afghan Sultáns and Governors of Bengal ..... 311

LXXIV.—Kings of the East, or Sharkí Dynasty of Jaunpur ..... 312

LXXV.—Musalmán Kings of Kashmír ..... 312

LXXVI.—Kings of Sind and Tatta ..... 313

F.—[Arab Governors of Sindh] ..... 313

LXXVII.—The Jámí Dynasty of Sumana, originally Rájputs ..... 313

LXXVIII.—Bahmaní Dynasty of Kalbarga, or Aḥsunábád ..... 314

LXXIX.—Berid Sháhí Dynasty of Bídar, or Ahmadábád ..... 314

LXXX.—Faruki Dynasty of Kándeish ..... 314

LXXXI.—Kings of Málwa ..... 315

LXXXII.—Kings of Gujarát ..... 315

LXXXIII.—Kings of Multán ..... 315

LXXXIV.—Imád Sháhí Dynasty of Berar ..... 315

LXXXV.—A'ádil Sháhí Dynasty of Bijápúr ..... 316

TABLE PAGE
LXXXVI.—Nizám Sháhí Dynasty of Ahmadnagar ..... 315
LXXXVII.—Kutb Sháhí Dynasty of Golconda ..... 316
LXXXVIII.—Moghul Emperors of Hindústán ..... 316
LXXXIX.—Nizáms of Haidarábád ..... 317
XC.—Nuwábs and Kings of Oudè ..... 317

ADDENDA TO USEFUL TABLES.

Gold and Silver Currencies of India (in continuation of returns given at pp. 81, 82, and 88) ..... 318

## PLATES.

PLATE
XLV.—Modern Coins of India ..... 64
XLVI.—Symbols on Modern Indian Coins ..... 67

# USEFUL TABLES,

ETC.

## BRITISH INDIAN MONETARY SYSTEM AS ESTABLISHED BY REGULATION VII. OF 1833 [OF THE BENGAL GOVERNMENT.]

Silver is the legally constituted medium of exchange in all money transactions throughout the British Indian possessions. Gold coin is a legal tender, at a fixed value of sixteen rupees[1] for the gold muhr[2] of Calcutta, and fifteen rupees for the gold muhr of Madras and Bombay; but it is not demandable in payment, and is left to find its current value in the market. Copper coin is only a legal tender at the established rate of sixty-four paisá[3] to the rupee, on payments falling short of one rupee.

The rupee is, then, the unit or standard measure of value throughout India, and by the Regulation lately passed, a perfect assimilation in weight and fineness has been effected in this unit of currency of the three Presidencies, so that the rupee of Upper India, of Madras, and of Bombay are now identical in value. From this uniformity are excepted the three provinces of Bengal Proper, Bahár, and Orissa; in which the Murshidábádí or sikká[4] rupee still continues to be the legal currency; but the relation of one coin to the other is now reduced to great simplicity, one Farrukhábád, Madras, or Bombay rupee being precisely equal to fifteen ánás[5] sikká.

[1] H روپیہ *rúpiya.* S रूप्य *rúpya,* 'silver.' [2] H مہر *muhr,* 'a seal.'
[3] H پیسا *paisá.* [4] P A سکہ *sikka,* 'a coining die.' H סכה.
[5] S आना *aná.* H آنا *aná.*

The following table exhibits the scheme of the British Indian monetary system:

| GOLD MUHR. | RUPEE. | ÁNÁ. | PAISÁ. | PÁ'Í.[1] |
|---|---|---|---|---|
| CALCUTTA ..... 1 | 16 | 256 | 1024 | 3072 |
| MADRAS AND BOMBAY.... 1 | 15 | 240 | 960 | 2880 |
| | 1 | 16 | 64 | 192 |
| | | 1 | 4 | 12 |
| | | | 1 | 3 |

Small shells, called kauṛís,[2] are also made use of for fractional payments, and are reckoned as follows: but their value is subject to considerable fluctuation, and they are now nearly superseded by the copper currency.

4 Kauṛís make ..... 1 Gaṇḍa.[3]
20 Gaṇḍas ..... 1 Pan.[4]
5 Pans..... 1 Áná.

## DESCRIPTION OF THE CURRENT COINS.

### GOLD AND SILVER.

The inscriptions upon the Company's gold and silver coins are in Persian, as follows:

OBVERSE of the sikká rupee struck at the Calcutta mint.

حامي دين محمد سايهٔ فضل اله سكه زد بر هفت كشور شاه عالم بادشاه

"Defender of the Muḥammadan faith, Reflection of Divine excellence, the Emperor Sháh 'Álam has struck this coin to be current throughout the seven climes."

REVERSE: ضرب مرشدآباد سنه ۱۹ جلوس ميمنت مانوس.

"Struck at Murshidábád in the year 19 of his fortunate reign."

The rupee of the Western provinces, coined at the late mints of Farrukhábád and Benáres, and now at the mint of Ságar, bears the same inscription on the obverse. On the reverse the date and place of coinage are different:—

ضربِ فرخ آباد سنه ۴۵ جلوس ميمنت مانوس

"Struck at Farrukhábád in the year 45 of his prosperous reign."

The several varieties of coin, produced by modifications of weight, standard, or die, from time to time in the Calcutta and subordinate mints of the Bengal Presidency, from their all bearing the same legend and date, are not easily recognized but by an experienced money-changer. As, however, different regulations regarding deficiency of

[1] H پائي *pá'í.* S पाद *páda*, 'a quarter.' [2] H کوڑي *kauṛí.*
[3] H گنڈا *ganda.* गण्डक (Elliot.) [4] H پن *pan.* S पण *paṇa.*

weight, etc., apply to the coins of the old and new standard, it is convenient to point out a mode of discriminating them.

1. The old standard sikká rupee of 1793-1818 has an oblique milling.

2. The new standard sikká rupee of 1818-1832 has a straight milling.

3. The new sikká rupee, struck under the present regulation, has a plain edge, without milling, and a dotted rim on the face.

The distinctions of the oblique and straight milling apply also to the old and new gold muhr. Of the up-country or Farrukhábád coins:—

4. The old standard Farrukhábád rupee (or '45th Sun Lucknow rupee' of Reg. XLV. 1803) has an oblique milling.

5. The Benáres rupee, coined 1806-1819, has also an oblique milling.

6. The new standard Farrukhábád rupee, coined at the Farrukhábád mint, 1819-24, and at the Benares mint, 1819-30, and now at the Ságar mint, has an upright milling.

7. The Farrukhábád rupee, coined under the new regulation at the Calcutta mint, has a plain edge, and a plain rim on the face.

The coins struck before 1793, at the old mints of Patna, Murshidábád, and Dacca, the Benares rupee anterior to 1806, and the coins of all the Native independent states, are known by their having no milling. The Company's coin up the country is thus generally called *kaldár*[1] 'milled, or made by machinery', in contradistinction to the unmilled or native coins, which are fashioned and stamped with the hammer and anvil.

The Madras rupee has a dotted rim on the face, and an indented cord-milling: that coined in Calcutta has an upright milled edge: it has the symbol of a rose on the obverse. The inscriptions are as follows:—

سکهٔ مبارک بادشاه غازي عزيزالدين محمد عالمگير

"The auspicious coin of the noble Monarch, Aziz-ud-dín Muḥammad 'Álamgír!" (the father of Sháh 'Álam.)

ضرب ارکات سنه ۲۰ جلوس ميمنت مانوس

"Struck at Arkát in the 20th year of his propitious reign."

The Bombay coin has now a plain edge and the following legend:

سکهٔ مبارک شاه عالم بادشاه غازي ۱۲۱۵

"The auspicious coin of the great Emperor, Sháh 'Álam, 1215."

ضرب سورت سنه ۴۶ جلوس ميمنت مانوس

"Struck at Súrat in the 46th year of his propitious reign."

[1] کلدار *kaldár*.

COPPER COINS.

The inscription on the Calcutta paisá is, on the OBVERSE:

سنه جلوس ۳۷ شاه عالم بادشاه

"In the 37th year of the reign of the Emperor, Sháh 'Álam."

On the REVERSE: एक् पाई सिक्का یک پاي سکّه एक् पाई सिक्का

"One pá'í sikká."

In Bengálí, Persian, and Nágarí characters. Serrated rim on the face and plain-edge milling.

The new double-paisá or half-áná piece has on one side merely the words 'half-áná,' in English and Bengálí: on the reverse, the same in Persian and Nágarí. The pá'í or third of a paisá has in the same manner merely the name 'one pá'í,' which makes it liable to be confounded with the 'one pá'í sikká,' and on this account, perhaps, it has not found ready currency. The natives reckon only sixty-four paisá to the rupee, while English accounts divide the áná into twelve pá'í; to distinguish them, this latter (hitherto an imaginary coin), was called the pá'í of account.

At Madras and Bombay an English device has been introduced for the copper coinage; on one side, the East India Company's arms; on the other, in the Bombay coin, a pair of scales, surmounted with the name of the coin in English; below, the word عدل *'adal*, 'justice,' in Arabic, and the Hijra date also in Arabic numerals. The Madras paisá coined in England in 1803, has, on the reverse, its value according to the old system 'XX. cash;'[1] and in Persian, بیست کاس چهار فلوس است *bist kás chahár falús ast*, 'twenty *kás* make four *fals*.' It weighs 180 grains (one tolá[2]), and the half and quarter in proportion.

The principal object in this place being to shew the present state of the currency and the existing mint regulations, it is unnecessary to detail the various alterations which have been made from time to time in the monetary systems of the three Presidencies, of which a sketch will hereafter be given as an introduction to the General Table of Indian Coins.

The adoption of a general pictorial impression for all the coins of the British possessions in India, in lieu of the present anomalous system, has frequently engaged the attention of the Government here and at home; and it is hoped, now that the new mints of Calcutta and Bombay are perfectly capable of executing such a design, and the prior measure of equalizing the standards of the three Presidencies has been carried into effect, that the unhappy tissue of mis-statements as to

[1] s कांस्य or कंस *kánsya* or *kans*. [2] s تولا *tolá*. (तोल)

names, places, and dates, exposed in the above list, will give place to a device at once worthy of the British name, and affording better security against fraudulent imitation.

## WEIGHT AND ASSAY OF THE COINS.

### GOLD COINS.

The privilege of coining gold in the Bengal Presidency is limited to the mint of Calcutta, where gold muhrs of two standards are now coined: the ashrafí[1] or Murshidábád gold muhr, which maintains a high degree of purity (99$\frac{1}{4}$ touch) has a weight of 190·895 grains troy. The new standard gold muhr of 1819 contains one-twelfth of alloy. The absolute quantity of pure metal was then reduced in a trifling degree to adjust the ratio of its value to that of silver as fifteen to one.[2] The new gold muhr therefore weighs sixteen-fiftcenths of a rupee, and passes by authority for sixteen rupees, but the ratio of gold to silver has been of late years higher in the Calcutta market, especially for the purer coins, so that the new muhr generally passes for sixteen

[1] P اشرفي *ashrafi.*

[2] In the English coins the ratio is 14.287 to 1—in the French money as 15.5 to 1.

[In continuation of this subject, I extract from the 'Numismatic Chronicle' some remarks of my own, in regard to the relative value of gold and silver in India, at the commencement of the Moghul rule: 'The authoritative reform of the coinage, effected by Shír Sháh (A.H. 946—952=A.D 1539 to 1545), appears by internal evidence to have been accompanied by a revision and re-adjustment of the relative value of the lower metals, silver and copper. There are no positive data to show at what rate silver exchanged against gold in the time of Shír Sháh; but an examination of Abúl-fazl's description of the coin rates of the great Akbar, who succeeded to the throne in 1556, A.D., discloses the very unexpected proportion of gold to silver as 1 to 9.4! I obtain this result from a comparison of the intrinsic contents assigned to four several descriptions of gold coins in the 'Ayín-i Akbarí,' as contrasted with the corresponding total weight of the silver money defined by the same authority as their exchangeable value. I understand both gold and silver to have been pure. Actual assay shows Akbar's gold coins to have been totally unalloyed, and Abúl-fazl himself directly asserts that the silver used in his master's coinage was pure.

I append an outline of my data on this head:—

1st.—Chagal, weight in gold T. 3, M. 0, R. 5$\frac{1}{4}$=30 Rs. of 11$\frac{1}{2}$ máshas each : 549.84 :: 172.5 × 30 (5175.0) : 1 :: 9.4118.

2nd.—Áftábí, gold, weight T. 1, M. 2, R. 4$\frac{3}{4}$=12 Rs. : 218.90 :: 172.5 × 12 (2070·0) : 1 :: 9.4563.

3rd.—Iláhí, gold, weight M. 12, R. 1$\frac{3}{4}$=10 Rs. : 183.28 :: 172·5 × 10 (1725·0) : 1 :: 9.4118.

4th.—'Adl Gutkah, gold, weight 11 máshas=9 Rs. : 165 :: 172.5 × 9 (1552·5) : 1 :: 9.40909.

(The common tolá of 180 gr., másha of 15 gr., and ratí of 1.875 gr. have been used in these calculations).

Annexed are the relative proportions of these several denominations of coins, as given by Abúl-fazl—extracted verbatim from an excellent MS. of his 'Ayín-i Akbarí.' And to complete the original details of the entire subject for those who may desire to

to seventeen, and the old gold muhr for seventeen to eighteen, sikká rupees. When originally coined, both of these moneys were at a discount.

The proportion of fifteen to one is also adopted in the gold rupees of Madras and Bombay, which are coined of the same weight as the silver money of those Presidencies, and pass current for fifteen silver rupees.

The weights and purity of the gold coins are as follows:—

| DENOMINATION. | Pure gold. | Alloy. | Weight in gold. | Weight in tolás. | Legal value. |
|---|---|---|---|---|---|
| Old Calcutta muhr,[1] with an oblique milled edge | 189.4037 | 1.4913 | 190.895 | 1.060 | 16 sikká rupees. |
| New standard gold muhr, with a straight milling | 187.651 | 17.059 | 204.710 | 1.137 | |
| Madras and Bombay new gold rupee ..... | 165 | 15 | 180 | 1.000 | 15 rupees. |

examine them, I also subjoin the Rupee equivalents, further determining the actual value of the silver coins.

چگل بضم چیم وکاف فارسے وسکون لام چهار گوشه سه تولچه و پنج سرخ و ربع قیمت سے روپیه

آفتابے گرد - بوزن یکتولچه دو ماشه و پنج سرخ ربع کم * بها * دوازده روپیه

الهي [لغل جلالي and] گرد * دوازده ماشه دو سرخ ربع کم آفتابے منقوش ارج ده روپیه

عدل گتکه بفتح عین وسکون دال ولام وضم کاف فارسے وسکون تاي فوقاني هندي وفتح کاف وهاء مکتوب یازده ماشکي قیمت نه روپیه

روپیه سیمین نقدیست گرد یازده و نیم ماشکي در زمان شیر خان پدید آمد * * ازچهل دام اگرچه پرخ افزون وکم شود لیکن در مواجب این قیمب اعتبار رود

جلاله چهارگوشه * * در وزن و نقش چون نخستین

روپیه سه گونه روایٔ داشت اول چهار گوشه پاک سیم بوزن یازده و نیم ماشه جلاله نام ارز چهل دام . . . . . [E.T.

[1] This coin is inserted, contrary to rule, because its fabrication is still permitted at the Calcutta mint, for the convenience of the merchants; as it bears a higher value, proportionally, in the market than the new muhr.

Half and quarter gold muhrs are coined of proportionate weight to the above.

The pagoda of Madras and the old gold muhr of Bombay will find their place in the General Table of Coins.

## SILVER COINS.

The weight, fineness, and relative value of the silver coins established by the new regulation are as follows:—

| DENOMINATION. | Pure silver. Troy grains. | Alloy. Troy grains. | Weight in troy grains. | Weight in tolás. |
|---|---|---|---|---|
| Calcutta sikká rupee..... | 176 | 16 | 192 | 1.0666 |
| Farrukhábád, Sonat,[1] Sâgar, Madras, or Bombay rupee ..... | 165 | 15 | 180 | 1.000 |

Eight-áná pieces (*áth-anni*[2]) and four-áná pieces (*súki*[3] or *chau-anni*[4]) are struck of proportionate weight to each of the above coins.

The standard quality of the metal is eleven-twelfths of pure silver to one-twelfth of alloy.

The conversion of sikká into Farrukhábád rupees and *vice versâ* may be effected in the simplest manner by the following rules, which obviate the necessity of providing tables for the purpose.

RULE FIRST.—To convert Farrukhábád rupees into sikká rupees:—Deduct one-sixteenth of the amount of the Farrukhábád rupees from that amount, and the result will be their equivalent in sikkás.

RULE SECOND.—To convert sikká rupees into Farrukhábád, Madras, or Bombay rupees:—Add one-fifteenth of the amount of the sikkás to that amount, and the result will be the equivalent in Farrukhábád, Madras, or Bombay rupees.

To avoid confusion here, the weights and values of the former currencies of the Company, which differ in a small degree from the foregoing scale, as well as those of the existing currencies of the Native States, will be inserted in the General Table before alluded to.

All silver money of the new standard (with a straight milling or a plain edge), is considered by law as of full weight until it has lost by wear or otherwise two pá'í in the rupee; or, in round terms, one per cent.

[1] سَنَوَات *sanawát*, pl. of سنة *sanat*, 'year.'

[2] آٹھ آنی *áth-anni*. [3] سوکي *súki*, or سوکا *sukâ*. [4] چو آنی *chau-anni*.

Coins of the old standard (with the oblique milling) remain subject to the provision of Regulation LXI., 1795, which allows them to remain a legal tender until they have lost only six ánás per cent.

The limits of weight are, therefore, as follows :—

| | Original weight. | Allowance for wear. | Minimum weight. | Min. weight of 100 rupees. |
|---|---|---|---|---|
| Old sikká or Murshidábád rupee | 179.666 grs. | 6 ánás per ct. | 179 grs. | 99.44 tolás |
| New sikká rupee... | 192 grs. | 2 pá'í p. rup. | 190 grs. | 105.55 tolás |
| Farrukhábád, old rupee ..... | 173 grs. | 6 ánás p. ct. | 172.352 | 95.75 tolás |
| „ new rupee ..... | 180 grs. | 2 pá'í p. rup. | 178.125 | 99. tolás |

Light-weight rupees are received by Government officers as bullion, the deficiency from standard weight being made good by the payer.

### COPPER COINS.

The copper coins of Bengal and Bombay are now equalized in weight, and are as follows :—

| | Troy grains. | Value. |
|---|---|---|
| The half-ánás piece ..... | 200 | 6 pá'í of account |
| The paisá (marked one pá'í sikká)..... | 100 | 3 ditto |
| The pá'í of account ..... | 33⅓ | 1 ditto |

By Regulation XXV. of 1817, Sect. 5, copper paisá, struck at the Benares mint, weighing 98¼ grains, which were intended at first (*vide* Reg. VII. 1814), for circulation in the province of Benares only, and were distinguished with a trident or *trisúl*,[1] the symbol of Siva, were made current throughout the Bengal provinces at par with the Calcutta and Farrukhábád paisá.

### Coinage Duty or Seignorage.

All the Company's mints are open to the reception of gold[1] and silver bullion for coinage on private account. The following is the course of proceeding adopted in the Calcutta mint: –after examination by the processes of cutting and burning, to ascertain that there is no fraudulent admixture, the proprietor takes a receipt from the Mint-Master for the weight of his bullion.—A specimen is then taken for assay, and after that operation the mint receipt is exchanged, at the Assay Office, for a certificate of the standard value of the bullion in gold or silver money. This certificate is convertible into cash at the Treasury as soon as the new coin may be transmitted thither from the mint.

[1] ترسول (त्रिशूल) [2] Except the Ságar Mint, which coins silver only.

A deduction is made from the assay produce of bullion to cover the expenses of coinage, which vary at the different mints as follows:

| | On Gold Bullion. | On Silver Bullion. |
|---|---|---|
| At the Calcutta mint..... | 2 per cent. | 2 per cent. |
| At the Ságar mint..... | 2 ditto. | 2 ditto. |

[If required in halves and quarters, an additional duty of one per cent, is levied at these Mints.]

| | | | |
|---|---|---|---|
| At the Madras mint[1] ..... | 3 per cent. | 4 per cent. | now 2 per cent. |
| At the Bombay mint[1] ..... | 2½ ditto. | 3 ditto. | |

On the re-coinage of rupees struck at the Company's mints of the Bengal Presidency, a charge of one per cent. only is levied.

The rates of seignorage at Bombay and Madras include the charge for refinage; for which a separate charge is made in the Calcutta and Ságar mints, on under-standard bullion only, at the rate of 0.4 per cent. per pennyweight of worseness in the assay: (unless such inferior bullion is required for the purposes of alligation at the mint, when the charge may be remitted on the authority of the Mint Master).

The following is a table of refined charges:—

| Assay. | Refining charge per cent. | Assay. | Refining charge per cent. | Assay. | Refining charge per cent. | Assay. | Refining charge per cent. |
|---|---|---|---|---|---|---|---|
| *dwts.* | | *dwts.* | | *dwts.* | | *dwts.* | |
| 0½ Wo. | 0.02 | 6½ Wo. | 0.26 | 12½ Wo. | 0.50 | 18½ Wo. | 0.74 |
| 1 Wo. | 0.04 | 7 Wo. | 0.28 | 13 Wo. | 0.52 | 19 Wo. | 0.76 |
| 1½ Wo. | 0.06 | 7½ Wo. | 0.30 | 13½ Wo. | 0.54 | 19½ Wo. | 0.78 |
| 2 Wo. | 0.08 | 8 Wo. | 0.32 | 14 Wo. | 0.56 | 20 Wo. | 0.80 |
| 2½ Wo. | 0.10 | 8½ Wo. | 0.34 | 14½ Wo. | 0.58 | 20½ Wo. | 0.82 |
| 3 Wo. | 0.12 | 9 Wo. | 0.36 | 15 Wo. | 0.60 | 21 Wo. | 0.84 |
| 3½ Wo. | 0.14 | 9½ Wo. | 0.38 | 15½ Wo. | 0.62 | 21½ Wo. | 0.86 |
| 4 Wo. | 0.16 | 10 Wo. | 0.40 | 16 Wo. | 0.64 | 22 Wo. | 0.88 |
| 4½ Wo. | 0.18 | 10½ Wo. | 0.42 | 16½ Wo. | 0.66 | 22½ Wo. | 0.90 |
| 5 Wo. | 0.20 | 11 Wo. | 0.44 | 17 Wo. | 0.68 | 23 Wo. | 0.92 |
| 5½ Wo. | 0.22 | 11½ Wo. | 0.46 | 17½ Wo. | 0.70 | 23½ Wo. | 0.94 |
| 6 Wo. | 0.24 | 12 Wo. | 0.48 | 18 Wo. | 0.72 | 24 Wo. | 0.96 |

And so on for silver of inferior quality. By the practice of the Calcutta mint, the charge for refinage is usually remitted up to 6 Wo.; at the Ságar mint, it is levied on all denominations of bullion inferior to standard.

The next two tables, for calculating the intrinsic or assay produce of bullion, are applicable to all the Company's mints, where the tolá weight has been adopted.

[1] These two are inserted on the authority of Kelly's 'Cambist;' it seems very advisable that the charges should be equalized at the three Presidency mints, as otherwise the desired uniformity of value cannot be maintained.

TABLE *of the Intrinsic or Assay Produce of Silver Bullion in Farrukhábád and Calcutta rupees, from the* 1*st of May*, 1833.

| Weight of bullion in tolás or new weight. | Assay Report. | Touch, or fine silver, in 100 parts. | Produce in Farrukhábád, Madras, or Bombay Rs. | Produce in Calcutta or sikká rupees. | Weight of bullion in tolás or new weight. | Assay Report. | Touch, or fine silver, in 100 parts. | Produce in Farrukhábád, Madras, or Bombay rupees. | Produce in Calcutta or sikká rupees. |
|---|---|---|---|---|---|---|---|---|---|
| | *dwts.* | | | | | *dwts.* | | | |
| 100 | 20 Br. | 100.000 | 109.091 | 102.273 | 100 | 5 Wo. | 89.583 | 97.727 | 91.689 |
| " | 19½ Br. | 99.792 | 108.864 | 102.060 | " | 5½ Wo. | 89.375 | 97.500 | 91.406 |
| " | 19 Br. | 99.583 | 108.636 | 101.846 | " | 6 Wo. | 89.167 | 97.273 | 91.193 |
| " | 19½ Br. | 99.375 | 108.409 | 101.633 | " | 6½ Wo. | 88.958 | 97.045 | 90.980 |
| " | 18 Br. | 99.167 | 108.182 | 101.421 | " | 7 Wo. | 88.750 | 96.818 | 90.767 |
| " | 17½ Br. | 98.958 | 107.955 | 101.208 | " | 7½ Wo. | 88.542 | 96.591 | 90.554 |
| " | 17 Br. | 98.750 | 107.727 | 100.994 | " | 8 Wo. | 88.333 | 96 364 | 90 341 |
| " | 16½ Br. | 98.542 | 107.500 | 100.781 | " | 8½ Wo. | 88.125 | 96.136 | 90.127 |
| " | 16 Br. | 98.333 | 107.273 | 100.568 | " | 9 Wo. | 87.917 | 95.909 | 89.915 |
| " | 15½ Br. | 98.125 | 107.045 | 100.355 | " | 9½ Wo. | 87.708 | 95.682 | 89.702 |
| " | 15 Br. | 97.917 | 106.818 | 100.142 | " | 10 Wo. | 87.500 | 95.455 | 89.489 |
| " | 14½ Br. | 97.708 | 106.591 | 99.929 | " | 10½ Wo. | 87.292 | 95.227 | 89.275 |
| " | 14 Br. | 97.500 | 106.364 | 99.716 | " | 11 Wo. | 87.084 | 95.000 | 89.062 |
| " | 13½ Br. | 97.292 | 106.136 | 99.502 | " | 11½ Wo. | 86.875 | 94 773 | 88.850 |
| " | 13 Br. | 97.083 | 105.909 | 99.290 | " | 12 Wo. | 86.667 | 94 545 | 88.636 |
| " | 12½ Br. | 96.875 | 105.682 | 99.077 | " | 12½ Wo. | 86.458 | 94 318 | 88.423 |
| " | 12 Br. | 96.667 | 105.455 | 98.864 | " | 13 Wo. | 86.250 | 94.091 | 88.210 |
| " | 11½ Br. | 96.458 | 105.227 | 98.690 | " | 13½ Wo. | 86.042 | 93.864 | 87.998 |
| " | 11 Br. | 96.250 | 105.000 | 98.437 | " | 14 Wo. | 85.834 | 93.636 | 87.784 |
| " | 10½ Br. | 96.042 | 104.773 | 98.225 | " | 14½ Wo. | 85.625 | 93.409 | 87.571 |
| " | 10 Br. | 95.833 | 104.545 | 98.011 | " | 15 Wo. | 85.417 | 93.182 | 87.358 |
| " | 9½ Br. | 95.625 | 104.348 | 97.798 | " | 15½ Wo. | 85.208 | 92.955 | 87.145 |
| " | 9 Br. | 95.417 | 104.091 | 97.585 | " | 16 Wo. | 85.000 | 92 727 | 86.932 |
| " | 8½ Br. | 95.208 | 103.864 | 97.372 | " | 16½ Wo. | 84.792 | 92.500 | 86.719 |
| " | 8 Br. | 95.000 | 103.636 | 97.159 | " | 17 Wo. | 84.583 | 92.273 | 86.506 |
| " | 7½ Br. | 94.792 | 103.409 | 96.946 | " | 17½ Wo. | 84.375 | 92.045 | 86.292 |
| " | 7 Br. | 94.583 | 103.182 | 96.733 | " | 18 Wo. | 84.167 | 91.818 | 86.079 |
| " | 6½ Br. | 94.375 | 102.955 | 96.520 | " | 18½ Wo. | 83.958 | 91.591 | 85 867 |
| " | 6 Br. | 94.167 | 102.727 | 96.306 | " | 19 Wo. | 83.750 | 91.364 | 85.654 |
| " | 5½ Br. | 93.958 | 102.500 | 96.094 | " | 19½ Wo. | 83.542 | 91.136 | 85.440 |
| " | 5 Br. | 93.750 | 102.273 | 95.881 | " | 20 Wo. | 83.333 | 90.900 | 85.227 |
| " | 4½ Br. | 93.542 | 102.045 | 95.667 | " | 20½ Wo. | 83.125 | 90.682 | 85.015 |
| " | 4 Br. | 93.333 | 101.818 | 95.454 | " | 21 Wo. | 82.917 | 90.454 | 84 801 |
| " | 3½ Br. | 93.125 | 101.591 | 95.241 | " | 21½ Wo. | 82.708 | 90 227 | 84.588 |
| " | 3 Br. | 92.917 | 101.364 | 95.029 | " | 22 Wo. | 82.500 | 90.000 | 84.375 |
| " | 2½ Br. | 92.708 | 104.136 | 94.815 | " | 22½ Wo. | 82.292 | 89.773 | 84.162 |
| " | 2 Br. | 92.500 | 100.909 | 94.602 | " | 23 Wo | 82.083 | 89.545 | 83.955 |
| " | 1½ Br. | 92.292 | 100.682 | 94.389 | " | 23½ Wo. | 81.875 | 89 318 | 83.736 |
| " | 1 Br. | 92.083 | 100.455 | 94.176 | " | 24 Wo. | 81.667 | 89.091 | 83.423 |
| " | ½ Br. | 91.875 | 100.227 | 93.963 | " | 24½ Wo. | 81.458 | 88.864 | 83.310 |
| " | Standard. | 91.667 | 100.000 | 93.750 | " | 25 Wo. | 81.250 | 88.636 | 83.097 |
| " | ½ Wo. | 91.458 | 99.773 | 93.537 | " | 25½ Wo. | 81.042 | 88.409 | 82.884 |
| " | 1 Wo. | 91.250 | 99.545 | 93.323 | " | 26 Wo. | 80.833 | 88 182 | 82 671 |
| " | 1½ Wo. | 91.042 | 99.348 | 93.114 | " | 26½ Wo. | 80.625 | 87.955 | 82.463 |
| " | 2 Wo. | 90.833 | 99.091 | 92.898 | " | 27 Wo. | 80.417 | 87 727 | 82 244 |
| " | 2½ Wo. | 90.625 | 98.864 | 92.685 | " | 27½ Wo. | 80.208 | 87.500 | 82.032 |
| " | 3 Wo. | 90.417 | 98.636 | 92.471 | " | 28 Wo. | 80.000 | 87.273 | 81.819 |
| " | 3½ Wo. | 90.208 | 98.409 | 92.258 | " | 28½ Wo. | 79.792 | 87.045 | 81.605 |
| " | 4 Wo. | 90.000 | 98.182 | 92.046 | " | 29 Wo. | 79.583 | 86.818 | 81.392 |
| " | 4½ Wo. | 89.792 | 97.955 | 91.833 | " | 29½ Wo. | 79.375 | 86.591 | 81.179 |
| | | | | | | 30 Wo. | 79.167 | 86.364 | 80.972 |

And so on of bullion of inferior quality.

TABLE *of the Intrinsic or Assay Produce of Gold Bullion in Calcutta gold muhrs and Bombay gold rupees.*

| Weight of bullion in tolás. | Assay in carats and grains. | Touch, or pure gold in 100 parts. | Intrinsic produce in tolás, or in Madras and Bombay gold muhrs. | Produce in new Calcutta gold muhrs of 204.710 grains. | Produce in old gold muhrs of 190.875 grains. | Weight of bullion in tolás. | Assay in carats and grains. | Touch, or pure gold in 100 parts. | Intrinsic produce in tolás, or in Madras and Bombay gold muhrs. | Produce in new Calcutta gold muhrs of 204.710 grains. |
|---|---|---|---|---|---|---|---|---|---|---|
| | *c. g.* | | | | | | *c. g.* | | | |
| 100 | 2 0 Br. | 100.000 | 109.091 | 95.923 | 95.035 | 100 | 1 0 Wo. | 87.500 | 95.454 | 83.831 |
| „ | 1 3¾ Br. | 99.740 | 108.861 | 95.674 | 94.787 | „ | 1 0¼ Wo. | 87.239 | 95.170 | 83.683 |
| „ | 1 3½ Br. | 99.479 | 108.523 | 95.423 | 94.540 | „ | 1 0½ Wo. | 86.979 | 94.886 | 83.433 |
| „ | 1 3¼ Br. | 99.219 | 108.239 | 95.173 | 94.293 | „ | 1 0¾ Wo. | 86.719 | 94.602 | 83.183 |
| „ | 1 3 Br. | 98.958 | 107.954 | 94.924 | 94.045 | „ | 1 1 Wo. | 86.458 | 94.318 | 82.933 |
| „ | 1 2¾ Br. | 98.698 | 107.670 | 94.674 | 93.798 | „ | 1 1¼ Wo. | 86.198 | 94.034 | 82.683 |
| „ | 1 2½ Br. | 98.437 | 107.386 | 94.424 | 93.550 | „ | 1 1½ Wo. | 85.937 | 93.750 | 82.434 |
| „ | 1 2¼ Br. | 98.177 | 107.102 | 94.174 | 93.303 | „ | 1 1¾ Wo. | 85.677 | 93.466 | 82.184 |
| „ | 1 2 Br. | 97.917 | 106.818 | 93.924 | 93.055 | „ | 1 2 Wo. | 85.416 | 93.182 | 81.934 |
| „ | 1 1¾ Br. | 97.656 | 106.534 | 93.675 | 93.808 | „ | 1 2¼ Wo. | 85.156 | 92.898 | 81.684 |
| „ | 1 1½ Br. | 97.396 | 106.250 | 93.425 | 92.560 | „ | 1 2½ Wo. | 84.896 | 92.614 | 81.434 |
| „ | 1 1¼ Br. | 97.135 | 105.966 | 93.175 | 92.313 | „ | 1 2¾ Wo. | 84.635 | 92.329 | 81.185 |
| „ | 1 1 Br. | 96.875 | 105.682 | 92.925 | 92.065 | „ | 1 3 Wo. | 84.375 | 92.045 | 80.935 |
| „ | 1 0¾ Br. | 96.615 | 105.398 | 92.675 | 91.818 | „ | 1 3¼ Wo. | 84.115 | 91.761 | 80.685 |
| „ | 1 0½ Br. | 96.354 | 105.114 | 92.426 | 91.570 | „ | 1 3½ Wo. | 83.854 | 91.477 | 80.435 |
| „ | 1 0¼ Br. | 96.094 | 104.829 | 92.176 | 91.323 | „ | 1 3¾ Wo. | 83.594 | 91.193 | 80.185 |
| „ | 1 0 Br. | 95.833 | 104.545 | 91.926 | 91.075 | „ | 2 0 Wo. | 83.333 | 90.909 | 79.936 |
| „ | 0 3¾ Br. | 95.573 | 104.261 | 91.676 | | „ | 2 0¼ Wo. | 83.073 | 90.625 | 79.686 |
| „ | 0 3½ Br. | 95.313 | 103.978 | 91.426 | | „ | 2 0½ Wo. | 82.812 | 90.341 | 79.436 |
| „ | 0 3¼ Br. | 95.052 | 103.693 | 91.177 | | „ | 2 0¾ Wo. | 82.552 | 90.057 | 79.186 |
| „ | 0 3 Br. | 94.792 | 103.409 | 90.927 | | „ | 2 1 Wo. | 82.291 | 89.773 | 78.936 |
| „ | 0 2¾ Br. | 94.531 | 103.125 | 90.677 | | „ | 2 1¼ Wo. | 82.031 | 89.489 | 78.687 |
| „ | 0 2½ Br. | 94.271 | 102.841 | 90.426 | | „ | 2 1½ Wo. | 81.770 | 89.204 | 78.437 |
| „ | 0 2¼ Br. | 94.010 | 102.557 | 90.177 | | „ | 2 1¾ Wo. | 81.510 | 88.920 | 78.187 |
| „ | 0 2 Br. | 93.750 | 102.273 | 89.928 | | „ | 2 2 Wo. | 81.250 | 88.636 | 77.937 |
| „ | 0 1¾ Br. | 93.489 | 101.989 | 89.678 | | „ | 2 2¼ Wo. | 80.990 | 88.352 | 77.687 |
| „ | 0 1½ Br. | 93.229 | 101.704 | 89.428 | | „ | 2 2½ Wo. | 80.729 | 88.068 | 77.438 |
| „ | 0 1¼ Br. | 92.969 | 101.420 | 89.178 | | „ | 2 2¾ Wo. | 80.469 | 87.784 | 77.188 |
| „ | 0 1 Br. | 92.708 | 101.136 | 88.928 | | „ | 2 3 Wo. | 80.108 | 87.500 | 76.938 |
| „ | 0 0¾ Br. | 92.448 | 100.852 | 88.679 | | „ | 2 3¼ Wo. | 79.948 | 87.216 | 76.688 |
| „ | 0 0½ Br. | 92.187 | 100.568 | 88.429 | | „ | 2 3½ Wo. | 79.687 | 86.932 | 76.438 |
| „ | 0 0¼ Br. | 91.927 | 100.284 | 88.179 | | „ | 2 3¾ Wo. | 79.427 | 86.648 | 76.189 |
| „ | Standard. | 91.667 | 100.000 | 87.929 | | „ | 3 0 Wo. | 79.166 | 86.364 | 75.939 |
| „ | 0 0¼ Wo. | 91.406 | 99.716 | 87.679 | | „ | 3 0¼ Wo. | 78.906 | 86.079 | 75.689 |
| „ | 0 0½ Wo. | 91.156 | 99.432 | 87.430 | | „ | 3 0½ Wo. | 78.646 | 85.795 | 75.439 |
| „ | 0 0¾ Wo. | 90.886 | 99.148 | 87.180 | | „ | 3 0¾ Wo. | 78.385 | 85.511 | 75.189 |
| „ | 0 1 Wo. | 90.625 | 98.864 | 86.920 | | „ | 3 1 Wo. | 78.125 | 85.227 | 74.940 |
| „ | 0 1¼ Wo. | 90.365 | 98.579 | 86.680 | | „ | 3 1¼ Wo. | 77.864 | 84.943 | 74.694 |
| „ | 0 1½ Wo. | 90.104 | 98.295 | 86.430 | | „ | 3 1½ Wo. | 77.604 | 84.659 | 74.440 |
| „ | 0 1¾ Wo. | 89.844 | 98.011 | 86.180 | | „ | 3 1¾ Wo. | 77.344 | 84.375 | 74.190 |
| „ | 0 2 Wo. | 89.583 | 97.727 | 85.931 | | „ | 3 2 Wo. | 77.083 | 84.091 | 73.940 |
| „ | 0 2¼ Wo. | 89.323 | 97.443 | 85.681 | | „ | 3 2¼ Wo. | 76.823 | 83.807 | 73.691 |
| „ | 0 2½ Wo. | 89.062 | 97.159 | 85.431 | | „ | 3 2½ Wo. | 76.562 | 83.523 | 73.441 |
| „ | 0 2¾ Wo. | 88.802 | 96.875 | 85.181 | | „ | 3 2¾ Wo. | 76.302 | 83.239 | 73.191 |
| „ | 0 3 Wo. | 88.541 | 96.591 | 84.932 | | „ | 3 3 Wo. | 76.042 | 82.954 | 72.941 |
| „ | 0 3¼ Wo. | 88.281 | 96.307 | 84.682 | | „ | 3 3¼ Wo. | 75.781 | 82.670 | 72.691 |
| „ | 0 3½ Wo. | 88.021 | 96.023 | 84.432 | | „ | 3 3½ Wo. | 75.521 | 82.386 | 72.442 |
| „ | 0 3¾ Wo. | 87.760 | 95.739 | 84.182 | | „ | 3 3¾ Wo. | 75.260 | 82.102 | 72.192 |
| | | | | | | | 4 0 Wo. | 75.000 | 81.818 | 71.942 |

Gold of inferior quality is not receivable for coinage in old standard muhrs.

And so on of bullion of inferior quality.

The refining charges on under-standard gold as applied at Calcutta are as follows:—

| | car. | gr. | | | car. | gr. | | |
|---|---|---|---|---|---|---|---|---|
| From ..... | 0 | 0¼ | Wo. | to | 1 | 1 | Wo. | ⅓ per cent. |
| From ..... | 1 | 1 | Wo. | to | 2 | 2 | Wo. | 1 per cent. |
| From ..... | 2 | 2¼ | Wo. | to | 3 | 3 | Wo. | 1⅓ per cent. |
| From ..... | 3 | 3¼ | Wo. | to | 5 | 0 | Wo. | 2 per cent. |
| From ..... | 5 | 0¼ | Wo. | to | 7 | 2 | Wo. | 2⅓ per cent., etc. |

For old standard muhrs, merchants are obliged to bring their gold already refined to the requisite degree of purity.

The produce of any weight, in tolás, of assayed bullion is found by multiplying it by the number opposite to the assay in the proper column (of sikká or Farrukhábád rupees, or new or gold muhrs, as the case may be), and dividing by 100. To find the pure contents, the number in the third column 'or touch,' must be taken as the multiplier. For example:—

I. 5432 tolás of refined cake silver reported, on assay, to be 15½ dwts. Br. yield in sikká rupees, 5432 × 100.355 ÷ 100 = 5451.254, or sá. rupees 5451 4 1.

II. 1200 tolás of dollars at 5 Wo. contain of pure silver 1200 × 89.583 ÷ 100 = 1075 tolás pure.

III. 100 twenty franc-pieces, weighing 55.319 tolás, at 0 1½ c. grs. Wo. yield 55.319 × 86.430 ÷ 100 = 47.812 new gold muhrs.

These tables, and, indeed, all that are inserted in the present paper, express the fractions of the rupee, or of the tolá, in decimals. For converting this expression into the ordinary division of ánás and pá'ís, and *vice versá*, the following table will be found very convenient, and of constant application in monetary calculations.

TABLE *for reducing Ánás and Pá'is into decimal parts of a Rupee.*
1 *aná* = 0.0625.

| ÁNÁS. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 pái |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | .0000 | .0052 | .0104 | 0156 | .0208 | .0260 | .0312 | .0365 | .0417 | 0469 | .0521 | .0573 |
| 1 | .0625 | .0677 | .0729 | .0781 | .0833 | .0885 | .0937 | .0990 | .1042 | .1094 | .1146 | .1198 |
| 2 | .1250 | .1302 | .1354 | .1406 | .1458 | .1510 | .1562 | .1615 | .1667 | .1719 | .1771 | 1823 |
| 3 | .1875 | .1927 | .1979 | .2031 | .2083 | .2135 | .2187 | .2240 | .2292 | .2344 | .2396 | .2448 |
| 4 | .2500 | .2552 | .2604 | .2656 | .2708 | .2760 | .2812 | .2864 | .2917 | .2969 | .3021 | .3073 |
| 5 | .3125 | .3177 | .3229 | .3281 | .3333 | .3385 | .3437 | .3489 | .3542 | .3594 | .3646 | .3698 |
| 6 | .3750 | .3802 | .3854 | .3906 | .3958 | .4010 | .4062 | .4115 | .4167 | .4219 | .4271 | .4323 |
| 7 | .4375 | .4427 | .4479 | .4531 | .4583 | .4635 | .4687 | .4740 | .4792 | .4844 | .4896 | .4948 |
| 8 | .5000 | .5052 | .5104 | .5156 | .5208 | .5260 | .5312 | .5365 | .5417 | .5469 | .5521 | .5573 |
| 9 | .5625 | .5677 | .5729 | .5781 | .5833 | .5885 | .5937 | .5990 | .6042 | .6094 | .6146 | .6198 |
| 10 | .6250 | .6302 | .6354 | .6406 | .6458 | .6510 | .6562 | .6615 | .6667 | .6719 | .6771 | .6823 |
| 11 | .6875 | .6927 | .6979 | .7031 | .7083 | .7135 | .7187 | .7240 | .7292 | .7344 | .7396 | .7448 |
| 12 | .7500 | .7552 | .7004 | .7656 | .7708 | .7760 | .7812 | 7865 | .7917 | .7969 | .8021 | .8073 |
| 13 | .8125 | .8177 | .8230 | .8281 | .8333 | .8385 | .8437 | .8490 | .8542 | .8594 | .8646 | 8698 |
| 14 | .8750 | .8802 | .8854 | .8906 | .8958 | .9010 | .9062 | .9115 | .9167 | .9219 | .9270 | .9323 |
| 15 | .9375 | .9427 | .9479 | .9532 | .9583 | .9635 | .9687 | .9740 | .9787 | .9844 | .9896 | 9948 |

## EXCHANGES.

For the conversion of the rupee into the equivalent currency of other nations, it is necessary to take into consideration the fluctuating relative value of the precious metals *inter se*, from the circumstance of gold being in some, and silver in others, the legal medium of circulation.

It is also necessary to take account of the mint charge for coining at each place, which adds a fictitious value to the local coin. The 'par of exchange' is, for these reasons, a somewhat ambiguous term, requiring to be distinguished under two more definite denominations. 1st, the 'intrinsic par,' which represents that case in which the pure metal contained in the parallel denominations of coins is equal. 2nd, the 'commercial par,' or that case in which the current value of the coin at each place (after deducting the seignorage leviable for coinage) is equal: or in other words, 'two sums of money of different countries are commercially at par, while they can purchase an equal quantity of the same kind of pure metal.'[1]

Thus, if silver be taken from India to England, it must be sold to a bullion merchant at the market price, the proprietor receiving payment in gold (or notes convertible into it). The London mint is closed against the importer of silver; which metal has not, therefore, a minimum value in the English market fixed by the mint price: although it has so in Calcutta, where it may always be converted into coin at a charge of two per cent. On the other hand, if a remittance in gold be made from this country to England, its out-turn there is known and fixed: each new Calcutta gold muhr being convertible into 1.66 or $1\frac{2}{3}$ sovereigns nearly; but the price of the gold muhr fluctuates as considerably in India as that of silver does in England, the natural tendency of commerce being to bring to an equilibrium the operations of exchange in the two metals.

The exchange between England and India has, therefore, a two-fold expression; for silver, the price of the sikká rupee in shillings and pence:—for gold, the price of the sovereign in rupees. To calculate the out-turn of a bullion remittance in either metal, recourse may be had to the following

## TABLES OF ENGLISH AND INDIAN EXCHANGES.

The data for the calculation of these tables are:—

1st. One *man*[2] (or 100lbs. troy) of silver (one-twelfth alloy) is coined into 3,200 Farrukhábád rupees, or into 3,000 sikká rupees, of which sixty-four and sixty respectively are taken as mint duty, being at the rate of two per cent.

[1] Kelly's 'Cambist,' iii., 13.

[2] A من *man* or *mann*. H מנה

2nd. 100lbs. troy of English standard silver (18-240ths alloy) are coined into 6,600 shillings, of which 400 are taken as seignorage or mint duty, being 4*s.* per lb., or nearly six per cent.; but the mint is not open to the holders of silver bullion, which is only purchased through the bank when required for coinage.

3rd. The sovereign (1-12th alloy) weighs 123.25 grains troy, and no duty is charged on its coinage. 100 lbs. of pure gold yields 5098.3 sovereigns, = 3069.5 new gold muhrs, = 3041.4 old gold muhrs, = 3490.9 Madras and Bombay muhrs.

TABLE *showing the produce of* 100 *sikká rupees and of* 1 *sikká rupee in shillings sterling at London, for different quotations of the price of silver in the London price current.*

| At the London price of silver per troy ounce. | | 100 sikká rupees will produce | Exchange per sikká rupee. | | Remarks. |
|---|---|---|---|---|---|
| *s.* | *d.* | *Shillings.* | *s.* | *d.* | |
| at 5 | 6 | 218.018 | 2 | 2.2 | Intrinsic par of coins. |
| 5 | 5 | 214.714 | 2 | 1.8 | (2*s.* 1.64*d.*) Calcutta mint price of silver. |
| 5 | 4 | 211.411 | 2 | 1.4 | |
| 5 | 3 | 208.108 | 2 | 1.0 | (2*s.* 1.07*d.*) commercial par of exchange. |
| 5 | 2 | 204.805 | 2 | 0.6 | |
| 5 | 1 | 201.501 | 2 | 0.2 | (2*s.* 0.58*d.*) London mint price of silver. |
| 5 | 0 | 198.198 | 1 | 11.8 | |
| 4 | 11 | 194.895 | 1 | 11.4 | (5*s.* 2*d.*) |
| 4 | 10 | 191.591 | 1 | 11.0 | |
| 4 | 9 | 188.288 | 1 | 10.6 | |
| 4 | 8 | 184.984 | 1 | 10.2 | |
| 4 | 7 | 181.681 | 1 | 9.8 | |
| 4 | 6 | 178.378 | 1 | 9.4 | |

TABLE *showing the produce of* 100 *Farrukhábád, Ságar, Sonat, Madras, or Bombay rupees* (*or* 100 *tolás*) *of Bengal standard silver* (*one-twelfth alloy*), *in shillings and the consequent rate of exchange.*

| London price of silver per troy ounce. | | 100 Farrukhábád, Madras, or Bombay rupees will produce | Exchange per Farrukhábád rupee. | | Remarks. |
|---|---|---|---|---|---|
| *s.* | *d.* | *Shillings.* | *s.* | *d.* | |
| 5 | 6 | 204.390 | 2 | 0.5 | Intrinsic par of coins. |
| 5 | 5 | 201.293 | 2 | 0.15 | (2*s.* 0.04*d.*) Calcutta mint price of silver. |
| 5 | 4 | 198.196 | 1 | 11.8 | |
| 5 | 3 | 195.099 | 1 | 11.5 | (1*s.* 11.51*d.*) commercial par of exchange. |
| 5 | 2 | 192.002 | 1 | 11.1 | |
| 5 | 1 | 188.905 | 1 | 10.7 | (1*s.* 11.04*d.*) London mint price of silver. |
| 5 | 0 | 185.809 | 1 | 10.3 | |
| 4 | 11 | 182.712 | 1 | 10.0 | (5*s.* 2*d.*) |
| 4 | 10 | 179.615 | 1 | 9.6 | |
| 4 | 9 | 176.518 | 1 | 9.2 | |
| 4 | 8 | 173.421 | 1 | 8.8 | |
| 4 | 7 | 170.324 | 1 | 8.44 | |
| 4 | 6 | 167.228 | 1 | 8.06 | |

The exchange which a bullion remittance from England to India will yield at the London prices of the first column may be found by adding two per cent. to the columns of produce: thus, at 5*s.* an ounce, 185.8+3.7=189.5 shillings invested in silver bullion, will produce 100 Farrukhábád rupees, and give an exchange of 1*s.* 10$\frac{3}{4}$*d.* per Farrukhábád rupee. The same remark applies to the above table for sikká rupee exchanges.

TABLE *shewing the produce of a remittance to London in gold bullion or coin, and the corresponding exchange in Calcutta, Farrukhábád, Madras, and Bombay rupees.*

| Calcutta price of Gold Muhr. | | Calcutta price of English Sovereign. | Calcutta price of standard Gold Bullion per 100 tolás. | Intrinsic produce of 100 Ságar rupees thus invested in England. | Intrinsic produce of 100 Farrukhábád, Madras, or Bombay rupees ditto. | Exchange per sikká rupee. | | Exchange per Farrukhábád, Madras, and Bombay rupee. | |
|---|---|---|---|---|---|---|---|---|---|
| *Rs.* | *An.* | *Sá. Rs.* | *Sá. Rs.* | *Shillings.* | *Shillings.* | *s.* | *d.* | *s.* | *d.* |
| 16 | 0 | 9 633 | 1406.868 | 207.616 | 194.640 | 2 | 0.91 | 1 | 11.35 |
| 16 | 2 | 9.708 | 1417.859 | 206.006 | 193 131 | 2 | 0.72 | 1 | 11.17 |
| 16 | 4 | 9.783 | 1428.850 | 204 422 | 191.646 | 2 | 0.52 | 1 | 10.99 |
| 16 | 6 | 9.858 | 1439.841 | 202.861 | 190.183 | 2 | 0.33 | 1 | 10.82 |
| 16 | 8 | 9.934 | 1450.832 | 201.325 | 188.743 | 2 | 0.15 | 1 | 10.64 |
| 16 | 10 | 10.009 | 1461.823 | 199.811 | 187.323 | 1 | 11.97 | 1 | 10.48 |
| 16 | 12 | 10 084 | 1472.814 | 198.329 | 185.924 | 1 | 11.79 | 1 | 10.31 |
| 16 | 14 | 10.160 | 1483.805 | 196.850 | 184.547 | 1 | 11.62 | 1 | 10.16 |
| 17 | 0 | 10.235 | 1494.797 | 195.403 | 183.190 | 1 | 11.44 | 1 | 9.98 |
| 17 | 2 | 10.310 | 1505.788 | 193.977 | 181.853 | 1 | 11.27 | 1 | 9.82 |
| 17 | 4 | 10.385 | 1516.779 | 192.571 | 180.535 | 1 | 11.10 | 1 | 9.66 |
| 17 | 6 | 10.462 | 1527.770 | 191.185 | 179.236 | 1 | 10.94 | 1 | 9.50 |
| 17 | 8 | 10.536 | 1538.761 | 189.820 | 177.956 | 1 | 10.77 | 1 | 9.35 |

[The old Calcutta gold muhr is omitted in this table, because it bears an artificial value, 14 or 15 ánás higher than the new standard muhr.]

The above tables give intrinsic results; that is, they exclude all calculation of charges, insurance, freight, commission, etc., which are of a variable nature. It may be generally assumed, however, that four per cent., or one penny in the rupee, will cover all expenses of remittance to England, from which may be deducted a saving of six months' interest, when comparing the transaction with mercantile bills of twelve months' date.

The par of exchange with other countries may be estimated from the intrinsic and mint produce of their coins, thus:—assuming the Spanish dollar to weigh 416 grains troy, and to be five dwts. worse in assay, we have for

SPAIN AND AMERICA.

100 DOLLARS { = 231.111 tolás in weight, = 225.858 Fd. rupees, = 211.742 sikká rupees, } or deducting duty of 2 per cent. { 221.341 Fd. rupees. 207.508 sikká Rs.

The Spanish dollar forms also the currency of the Straits of Malacca

and of Manilla; and it is extensively known in the colonies of England, Ceylon, the Cape, Australia, etc.

For the British colonial possessions, however, an Order of Council was promulgated on the 23rd March, 1825, extending to them the circulation of British silver and copper money, and directing all public accounts to be kept therein. Where the dollar was, either by law, fact, or practice, still a legal tender, it was to be accounted equivalent to 4*s.* 4*d.*, and *vice versâ*. For the Cape of Good Hope, where the circulation consisted of paper rix-dollars;—and Ceylon, where it consisted of silver and paper rix-dollars, as well as a variety of other coins;—it was provided that a tender and payment of 1*s.* 6*d.* in British silver money should be equivalent to the rix-dollar. The sikká rupee was to be allowed circulation at 2*s.* 1*d.* and that of Bombay at 1*s.* 11*d.*, and the five-franc piece at 4*s.* These regulations are still in force in Ceylon, Australia, Van Diemen's Land, the Cape, Mauritius, and St. Helena.

FRANCE.

The French kilogramme of standard silver (1-10th alloy) is coined into 200 francs, and the kilogramme weighs 85.744 tolás; therefore

| | | | | |
|---|---|---|---|---|
| 100 FRANCS | = 42.872 tolás in weight, | | | |
| | = 42.092 Fd. rupees, | or deducting duty of 2 per cent. | = 41.250 Fd. rupees. | |
| | = 39.462 sikká rupees, | | = 38.673 sikká rupees. | |

The coinage duty on silver at Paris is $1\frac{1}{2}$ per cent., or $\frac{1}{2}$ per cent. less than in India; hence it will be found that,

100 sikká rupees realize almost precisely 250 francs at the Paris mint.

Minted gold in France is worth $15\frac{1}{2}$ its weight of minted silver, or the kilogramme is coined into 155 napoleons or twenty-franc pieces: the seignorage on gold is only $\frac{1}{3}$ per cent.

One kilogramme of pure gold yields 81.457 gold muhrs, or (deducting 2 per cent. mint duty) 79,828 ditto, therefore

| | | | | |
|---|---|---|---|---|
| 100 NAPOLEONS | = 55.319 tolás in weight, | | | |
| | = 47.315 old gold muhrs, | or deducting duty of 2 per cent. | = 46.369 old gold mrs. | |
| | = 47.757 new ditto, | | = 46.802 new ditto. | |
| | = 54.313 Madras and Bombay gold rupee, | | = 53.227 Madras and Bombay gold rupee. | |

CHINA.

As the Chinese have no gold or silver coins, but make payments in those metals by weight, it is sufficient to state the value of the tael of the sycee and dollar silver usually current with them.

| | | | | |
|---|---|---|---|---|
| 100 tael of Sycee silver av. 15 dwts. Br. | = 322.135 tolás in weight = (120 oz. 16 dwts. English). | | | |
| | = 344.108 Fd. rupees, | or deducting duty of 2 per cent. | = 337.226 Fd. rupees. | |
| | = 322.602 sikká rupees, | | = 316.150 sá. rupees. | |
| 100 tael of dollars 5 Wo. | = 314.811 Fd. rupees, | or deducting duty of 2 per cent. | = 308.515 Fd. rupees. | |
| | = 295.135 sá. rupees, | | = 289.233 sá. rupees. | |

The par of exchange with other places may in a similar manner be found from the table of coins.

## GENERAL TABLE OF INDIAN COINS.

When it was said, at the commencement of this paper, that the rupee was the universal unit of currency throughout India, a reservation should have been made for those parts of the Peninsula where the Pagoda and Fanam still circulate. There are, in fact, two distinct systems still prevalent, the Hindú and the Musalmán; and although the former has become extinct throughout the greater part of Hindústán by the predominance of the Muhammadan power, it is traceable in the old coins found at Kanauj, and other seats of ancient Hindú sovereignty, which agree nearly in weight with the coins still extant in the several petty Hindú States of Southern India.

### HINDÚ SYSTEM.

The unit of this system was of gold, and the old specimens found are of sixty or one hundred and twenty grains in weight: showing an evident connection with the Grecian drachma and didrachma of gold (or χρυσος and διχρυσος) and confirming the testimony afforded by the device and symbols of old Hindú coins, of a direct descent from their Bactrian prototype.

As the Muhammadan power never gained an entire ascendancy in the Peninsula, the same system of currency continued to be issued from the mints of a number of petty Rájships in Malabar and the Carnatic. The principal of these were at Bangalor and Maisúr, under the Ikkerí Rájá, who coined the Sadasiva húns,[1] so called from a former Rájá. They bore the figures of Siva and Párvatí on one side, and a temple on the reverse. During the usurpation of Hyder 'Alí and Tipú, Bahádurí and Sultání húns were struck in Maisúr; the former are distinguished by a ح the initial of Hyder's name. At Travancore also a mint has existed for a very long period, coining Ánandráí húns, so called from a prince of that name. The Ikkerí and Travancore mints are the only two now in existence.

The name of this coin among Europeans is 'Pagoda,' a Portuguese appellation derived from the pyramidal temple depicted on one side of it. The proper Hindú name is Varáha,[2] 'wild boar,' and doubtless originated in a device of the Boar Incarnation, or Avatár, of Vishnu upon the ancient coinage of the Carnatic; for the same figure appears as the signet of the Rájás of that country, on some old copper grants of land in the Mackenzie collection.[3] The Hindú name probably

[1] هون [2] वराह

[3] The Varáha also appears on some ancient silver coins of Orissa. See Wilson's account of coins of this type, 'Asiatic Researches,' vol. xvii. p. 586.

varied according to the image on the coin; thus we find the Rámatanka having the device of Ráma and his attendants; and the Matsya[1] hún of Vijayanagar with four 'fish' on the obverse. Other pagodas have Vishnu, Jaganáth, Venkateswar, etc. on them; those with three Swámís, or figures, are of the best gold, and are valued ten per cent. higher than the common pagoda.

'Hún' is the common term used by the Muhammadan writers, and indeed generally by the natives, for the pagoda. It signifies 'gold' in the old Carnatic language.

The hún was subdivided into 'fanams' and 'kás.' Fanam, or more properly panam,[2] is identical with the word pan, known in this part of India as one of the divisions of the Hindú metrical system, now applied chiefly to a certain measure of kaurís and copper money. The old fanam was of gold only, and was one-sixteenth of a hún. In the 'Lilávatí' we find sixteen pana = one dharan,[3] sixteen dharan = one nishk;[4] where the dharan (or dharam) seems to accord with the hún, which, as before said, is identical in weight with the Greek drachma. The Ikkerí pagoda still contains sixteen fanams: that of Vírarái and Anandrái, fourteen; and the Kalyan pagoda, twenty-eight. The division adopted by the English was forty-two.

'Kás' may be a corruption of the Sanskrit word Karsha,[5] which is mentioned in Colebrooke's 'Essay on Indian Weights,' as the same with the pan: 'a Karsha, or eighty raktikás[6] (ratís) of copper is called a pana, or Karsha-pana.'[7] It is now the eightieth part of a pan, but similar discrepancies are common throughout, and the simple word is all that can be identified as having survived the changes of system.

As accounts were formerly kept at Madras in this currency, the following particulars extracted from Kelly's 'Cambist' will be found useful for reference:

'According to the old system, accounts are kept in star-pagodas, fanams, and kás.

8 kás = 1 fanam.

336 kás = 42 fanams = 1 pagoda.

The Company reckon twelve fanams to the Arcot rupee, and three and a half rupees to the pagoda. The bázár exchange fluctuates from thirty-five to forty-five fanams per pagoda, the latter being a gold coin, and the former of silver; but fanams were also coined of base gold. Copper i-, v-, x-, and xx-, kás pieces were coined in England, by contract, for Madras so early as 1797; the xx-kás is also called 'dodo' and 'falús.'[8]

The star-pagoda weighs 52·56 grains, and is nineteen one-fifth carats fine: it is, therefore, intrinsically worth 7*s.* 5¼*d.* sterling; but it is commonly valued at 8*s.* Many varieties of the pagoda circulate on the Coromandel coast, which will find their places in the General Table.

[1] मत्स्य [2] पण [3] धरन् [4] निष्क् [5] कर्ष
[6] रक्तिका [7] कर्षपण [8] فلوس plural of فَلْس

In 1811 a coinage from Spanish dollars took place, consisting of double rupees, rupees, halves, and quarters; and pieces one-, two-, three-, and five-, fanams; the rupee weighed 186·7 grains. A silver coinage of half- and quarter-pagodas of dollar fineness also then took place; the half-pagoda weighed 326·73 grains troy, and was equal to $1\frac{3}{4}$ Arcot rupees. By a proclamation of 7th January, 1818, the silver rupee of one hundred and eighty grains was constituted the standard coin, and all accounts and public engagements were ordered to be converted at the exchange of three hundred and fifty rupees per hundred pagodas.

The proportion between the old and new currency is therefore now $3\frac{1}{2}$ rupees per pagoda; and in copper seventy-five kás old currency = fourteen paisá new currency.'

## MUSALMÁN SYSTEM.

The Musalmán system, of which the muhr and the rupee are the characteristic denominations of coin, assumes at the present day a multifarious appearance from the great variety in weight and value of the rupees current in different parts of India. That they have a common origin; and, in fact, that most of the rupees now issued from the Native mints of Central India are of modern date, is easily proved, since they almost all bear the impress of Sháh 'Alam, like our own coin.

The silver rupee was introduced, according to Abú'l-fazl, by Shír Sháh, who usurped the throne of Dihlí from Humáyun in the year 1542. Previous to his time, the Arabic dirham[1] (silver drachma), the gold dínár[2] (denarius auri), and the copper falús[3] (follis) formed the currency of the Moghul dominions. Shír Sháh's rupee had, on one side, the Muhammadan creed; on the other, the emperor's name and the date in Persian; both encircled in an annular Hindí inscription. Since 'the same coin was revived and made more pure' in Akbar's reign, we may assume the original weight of the rupee from Abú'l-fazl's statement, to have been eleven and a quarter máshas[4]; Akbar's square rupee, called from its inscription the Jalálí,[5] was of the same weight and value. This coin was also called the Chahár-yárí,[6] from the four friends of the prophet, Abu-bakr, Omar, Osman, 'Alí, whose names are inscribed on the margin. This rupee is supposed by the vulgar to have talismanic power.

Concerning the weight of the másha some difficulty prevails, as this unit now varies in different parts of India. Mr. Colebrooke makes it seventeen grains and three-eighths nearly; but the average of several gold and silver jalálís of Akbar's reign, found in good preservation, gives 15·5 grains, which also agrees better with the actual másha of

[1] درهم [2] دينار

[3] This name is still preserved on the Madras paisá or Kás pieces.

[4] मास, ماشه [5] جلالي [6] چهار ياري

many parts of Hindústán.[1] By this calculation the rupee originally weighed 174·4 grains troy, and was of pure silver (or such as was esteemed to be pure). The same standard was adopted by the Emperor Akbar, and accordingly we find coins of Akbar's reign dug up in

[1] The following are the másha weights sent home for examination in 1819, as published in that highly useful work, Kelly's 'Cambist':

| | | | |
|---|---|---|---|
| Jálna másha | 15.373 grs. | The Patna másha is called... | 18.5 grs. |
| Bellary | 14 687 | The Benáres from several specimens | 17.7 |
| Málwá | 15.833 | | |
| Súrat | 15.600 | The Calcutta másha, by Kelly | 32.0 |
| Ahmadnagar | 15.700 | | |
| Puna | 15.970 | But probably this was a double másha. | |

The average of all these agrees nearly with the Akbarí másha.

A gold jaláli of Láhor, rather worn, weighs 186·6: this may be the 12½ másha coin mentioned by Abú'l-fazl, which would give fifteen grains for the másha.

[ I annex some incidental information on the subject of Shír Sháh's coin-weights and values, which I had occasion to draw up some years ago. I insert the entire passage in this place as further illustrative of the true weight of the másha.

"I have previously ('Coins of Pathán Kings of Dehlí,' Preface, p. vii.) assumed, from existing specimens of the silver money of Shír Sháh, that the original mint standard of his rupees was calculated at an average weight of 178 grains, if not more. Abú'l-fazl's statement on the point, scrutinized more critically than it has heretofore been, affords a singularly close confirmation of this inference. I find it recorded in no less than four excellent copies of the original Persian 'Ayín-i Akbarí,' that the rupee of Akbar, which was based upon that of Shír Sháh, weighed eleven and a half máshas; the same weight is assigned in these copies of the MS. to Akbar's jaláli, which is avowedly identical in value with the former.* I mention this prominently, as Gladwin, in his translation (I. pp. 29, 35, etc.) has given eleven and a quarter máshas as the weight of each of these coins; and Prinsep, in accepting Gladwin's figures, was led to place the weight of the old rupee at nearly four grains below its true standard.

"There is some doubt as to the exact weight we are to allow to the másha, which varied considerably in different parts of India. Prinsep has determined the Dehlí másha to be 15.5 grains, and admitting this, the result shows Shír Sháh's rupee to have weighed 178.25 grains of what was esteemed pure silver.

"The assignment of 15.5 grains to the Shír Sháhí másha is equally well borne out in the test afforded by Akbar's own coins. In order to avoid the very probable error of mistaking the identical class, among three but little varying denominations of the gold coinage, to which any given specimen within our reach should belong, I confine my reference to the silver money of Akbar, which, though differing in its various mintages, in types and legends, was preserved, in effect, uniform in weight and value. Marsden has contributed an example (No. DCCCXXIV.) of a square jaláli of this Pádsháh, weighing 176.5 grains: had the tolá at this time been fixed at 180 grains, this coin would contain four grains more than the law required; as it is, even allowing for wear, it shows a return of 15.3 grains to each of the 11½ máshas of 15.5 grains, which should, under the higher scale of weights, originally have constituted its total on issue from the mint.

"The adoption of this 15.5 grain másha as a standard, necessitates a concurrent recognition of a proportionately increased weight in the tolá as then in use; we can scarcely suppose the twelve máshas composing the tolá to have aggregated 186 grains, while the tolá itself remained at the 180 grains modern usage has assigned it. We have fortunately at hand a second means of proving the question, in the due determination of the intrinsic contents of the pieces composing the lower currency of the period, and the result will be found to show sufficient confirmation of the theory which places the másha of Shír Sháh at 15.5, and the tolá at 186 grains troy.

* Gladwin, 'Ayín-i Akbarí,' I. 62, 59, 70. See also note [2], p. 5.

various places, and worn, weighing from one hundred and seventy to one hundred and seventy-five grains.

Cabinet specimens of the coins of Jahángír, Sháh Jahán, and Aurangzíb have also an average weight of one hundred and seventy-five

Forty dáms of copper, we are told, were in Akbar's time equivalent in account, and ordinarily in exchange, to one rupee, and the dám of copper is itself defined at 5 tánks, or 1 tolá 8 máshas and 7 ratís in weight. The measure of value thus specified is likewise distinctly stated to be a continuation of a previously existing species of money, which at the moment when Abú'l-fazl wrote, went by the name of 'Dám.' There can be but little hesitation in admitting, almost *primâ facie* on the evidence available, that the copper pieces classed under Nos. 185, 186, Vol. xv., 'Numismatic Chronicle,' were the identical coins of Shír Sháh, to which the succeeding dáms of Akbar were assimilated; or, in other words, that they were in weight and value (whatever their name) the dáms of the Afghán Sultán. It is a nicer point to determine the precise contents in grains attending the original mint issue of these coins; but first taking the figures now proposed for máshas and tolás, we obtain from 1 tolá 8 máshas and 7 ratís, at 186 per tolá, a sum of 323.5625 grains; and then testing this return of the actual present weight of extant coins, we obtain a very reasonably close approximation to our figured result. It is true that the general average of the various existing provincial coins of this class minted during the reigns of Shír Sháh and his Afghán successors, would necessarily run somewhat below the rate of 323.5 grains; but we have to allow a considerable per centage for loss by wear in such heavy coins, especially composed as they are of copper, which metal would always continue more freely current, and consequently suffer far more from the abrasion incident to frequent transfers, than the more carefully guarded and less readily exchanged silver and gold. However, we may, without claiming too much margin on these grounds, fairly consider ourselves within the mark in identifying the general series of coins under review as having originally an intentional standard of 323.5 grains, inasmuch as we can at this day produce several specimens of the coinage weighing 322 grains, and in one instance of a Hissár coin, we can reckon no less than 329 grains. Added to this, we have the evidence of Ferishta that in his day there was a paisá! (or fixed weight? پول[a]) which was rated at 1¾ tolás, which, at 186 grains the tolá, gives even a higher return of 324.5 grains.

"At the same time, on the other hand, it would be impossible to reduce the coins that furnish our means of trial, to anything like so low a general average as would admit of 314 grains (or the produce of the simple 180 grains total) being received as the correct issue weight.

"Adopting, then, the rate of 323.5 grains as the legitimate weight of these copper pieces, forty of which exchanged against a rupee, we have a total of 12,940 grains of copper as equal to 178 grains of silver, which determines the relative value of silver to copper as 1 to 72.7. If this be a correct estimate, there were in each dám 9.29 chítals,[b] and in the Shír Sháhí rupee 371.8 chítals, instead of the old 320 divisional coins of that name and value, which went to the lighter silver piece of former days, when also the comparative value of silver and copper stood at a more favourable ratio for the latter."—E.T.]

[ Colonel William Anderson, C.B., an officer who has had extensive experience in

[a] "پول (Pehlví, پوهل Pársí, *puhal*); 2) Obolus et res quævis obolo similis, ut squama piscis, simil. (فلوس) Borhâni Kâtiu. Inde پي پلي n.c. Pecuniæ defectus."—Vullers. See also 'Journal of the Asiatic Society of Bengal,' vii. 898, and Fræhn's 'Recensio,' p. 207, etc. Abú'l-fazl says the پُل of olden days was equal to four tolás.—Gladwin's 'Ayín-i Akbarí, iii. 89. Ferishta again gives 1 or 1¾ tolás!

[b] چيتل

grains pure, and the same prevails with little variation, up to the time of Muhammad Sháh, in the coins of opposite extremities of the empire; or struck in the Súbahs of Súrat, Ahmadábád, Dihlí, and Bengal.

The following are a few examples of this agreement:

| | | | |
|---|---|---|---|
| Akbarí, of Láhor..... | 175·0 grains. | Sháh Jahání, of Agra ..... | 175 0 grains. |
| ——— Agra ..... | 174·0 do. | ——— Ahmadábád. | 174·2 do. |
| Jahángírí, Agra ..... | 174·6 do. | ——— Dihlí..... | 174·6 do. |
| ——— Alláhábád | 173·6 do. | ——— Súrat..... | 175·0 do. |
| ——— Kandahár. | 173·9 do. | ——— Láhor ..... | 174·0 do. |

To which may be added from the Table of Coins assayed at the mint, reckoning pure contents only:

| | | | |
|---|---|---|---|
| Dihlí Sonat ..... | 175·0 grains. | Dacca, old..... | 173·3 grains. |
| ———'Alamgír ... | 175·5 do. | Muhammad Sháhí ..... | 170·0 do. |
| Old Súrat rupee ..... | 174·0 do. | Ahmad Sháh ..... | 172·8 do. |
| Murshidábád ..... | 175·9 do. | Sháh 'Alam (1772) .. ..... | 175·8 do. |
| Persian rupee of 1745 | 174·5 do. | | |

The above quotations are sufficient to show that the Moghul emperors maintained a great uniformity in the currency of their vast empire. They were also tenacious of their privilege of coining, and we find from Abú'l-fazl that gold was only allowed to be minted at Agra, Bengal, Ahmadábád (in Gujarát), and Kábul. Ten other cities were allowed to coin silver, namely, Allahábád, Súrat, Dihlí, Patna, Kashmír, Láhor, Multán, and Tánda: while, besides the former, twenty-eight towns of minor note were permitted to fabricate copper money, viz., Ajmír, Oudh, Attak, Alwar, Badáon, Benáres, Bhakar, Bhara, Patan, Jaunpúr, Jálandhar, Saháranpúr, Sárangpúr,

connexion with Indian weights and measures, has favoured me with the subjoined independent results of his calculations on the general question.

"I am inclined to consider that the weight of the ratí may be assumed, perhaps as an extreme proportion, as high as 1.93 grains, and the másha at 15.44 grains, which will give the following return for the gold, silver, and copper coins of Akbar's time:

| | |
|---|---|
| Aftábí..... | 225 grains. |
| Jaláli ..... | 187 do |
| Round muhr ..... | 169 do |
| Rupee (silver) ..... | 177 do |
| Dám (copper)..... | 307 do " |

The result tabulated in correspondence with these data appears as follows:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Ratí | = | | | | 1.93 grains. |
| 8 | Ratís | = | 1 Másha | = | 15.44 | " |
| 4 | Máshas | = | 1 Tánk | = | 61.76 | " |
| 3 | Tánks[a] | = | 1 Tolá | = | 185.2 | " |
| 1.666 | Tolás | = | 1 Dám[b] | = | 307.4 | " |
| 30 | Dáms | = | 1 Ser | = | 9222.0 | " |
| 40 | Sers[c] | = | 1 Man | = | 368,880.0 | " |

The relative values of the metals are estimated by Colonel Anderson—

| | |
|---|---|
| Gold to silver ..... | 9.4 to 1 |
| Silver to copper ..... | 70.0 to 1 —E.T.] |

[a] S टङ्क ٹانک also P تنکہ 'gold, money, a particular species of coin.'

[b] H دام

[c] S सेर (सेटक) سیر

Sambhal, Kanauj, Rantanbhor, Hardwár, Hissár, Kálpí, Gwáliár, Gorakhpúr, Kalánor, Lukhnow, Mandau, Nágor, Sirhind, Síálkot and Saronj.[1]

The whole of the discrepancies which we now find in the rupees of various places seem to have arisen out of the disturbances and breaking up of the empire in the reigns succeeding Muhammad Sháh, when numerous mints were established by ministers and by the viceroys of the principal Súbahs who were assuming independence; and the coin was gradually debased as the confusion and exigencies of the time increased. The Maráthí and other Hindú states also established mints of their own, retaining, for form's sake, however, the Emperor's name and superscription, as a titular avowal of Dihlí supremacy.

We may thus trace with tolerable accuracy the causes of the difference in the currencies of our own provinces, and the happy chance which brought those of Madras, Bombay, and Farrukhábád to such close approximation.

The extent to which the irregularities of the mints had proceeded in the turbulent reign of Sháh 'Alam is thus described in the preamble of Regulation XXXV., 1793, the first which treats of mint matters:— 'The principal districts in Bengal, Behar, and Orissa had each a distinct silver currency, consisting either of nineteenth sun Moorshedabadees, or old or counterfeit rupees of various years coined previous or subsequent to the Company's administration.' The circumstance of the date of coinage being inserted on the coin enabled the shroffs[2] to recog-

[1] [As likely to assist those who would desire to trace these names on the original coins, I subjoin an alphabetical list of Akbar's mints in the Persian character, extracted from MSS. of Abú'l-fazl's 'Ayín-i Akbarí.'

| | | | |
|---|---|---|---|
| 1 اٹک | 12 بهکر | 23 سرونج | 33 کلانور |
| 2 اجمیر | 13 بهرة | 24 سرهند | 34 گوالیار |
| 3 احمدآباد | 14 پٹن | 25 سنبهل | 35 گورکهپور |
| 4 آگرة | 15 پٹنه | 26 سورت | 36 لاهور |
| 5 الور | 16 ٹانڈة | 27 سهارنپور | 37 لکهنو |
| 6 الهٰباس | 17 جالندهر | 28 سیالکوٹ | 38 متهرة |
| 7 اودة | 18 جونپور | 29 قنوج | 39 ملتان |
| 8 اوجین | 19 حصار(فیروزة) | 30 کابل | 40 منڈو |
| 9 بداون | 20 دهلي | 31 کالپي | 41 ناگور |
| 10 بنارس | 21 رنتنبهور | 32 کشمیر | 42 هردوار |
| 11 بنگاله | 22 سارنگپور | | [E.T.— |

[2] صرّف *sarráf*, 'a money-changer.'

nize each, and so to apply the battá[1] to which the known debasement of each entitled it: it was rather a convenience therefore to restrict the circulation of one species to one district, although so much deprecated in the Regulation in question. In exchanges from one place to another, there however, might be, as stated, room for much abuse among the money-dealers. The Company resolved to remedy this evil in 1793, by declaring that all rupees coined for the future should bear the impression of the nineteenth year of Sháh 'Alam, and thus, by its adoption at that early period, it has happened that the sikká rupee is the only one of their coins which retains the full value of the original Dihlí rupee at the present day.

The Súrat rupee of the Moghul Emperor was in like manner about the same time adopted as the currency of the Bombay Presidency: it weighed 178.314 grains, and contained 172.4 pure, being thus nearly equal to the Dihlí rupee. By an agreement of the English government with the Nawáb of Súrat, the rupees coined by both were to circulate at par, and they were mutually pledged to preserve its standard. The Nawáb's rupees, however, were soon found to contain 10, 12, and even 15 per cent. of alloy; in consequence of which, the Bombay rupees were melted down and re-coined at Súrat; the coinage of silver in the Bombay mint was suspended for twenty years, and the Súratís alone were seen in circulation. At length, in 1800, the Company ordered the then Súrat rupee to be struck at Bombay, and thenceforth it became fixed at 179 grains weight, 164.74 pure. The muhr was also equalized in weight thereto.[2] Lastly, in 1829, under orders from the Home Government, the currency of the West was equalized with that of Madras, by the adoption of the one hundred and eighty grain rupee and muhr.

The Arcot rupee, according to our Assay Tables, in 1788, still retained one hundred and seventy grains of pure silver, and subsequently, when coined at the mint of Fort St. George, it had a weight of 176.4 grains, or 166.477 grains pure, until the new system was introduced in 1818, and the Madras one hundred and eighty grain rupee was established. From some reason or other, perhaps from commerce between the places, the Chittagong and Dacca currency formerly consisted of Arcot rupees; and they were for some time coined expressly for those districts at the Calcutta and Dacca mints; the average of many of various denominations still circulating in Chittagong agrees closely with the Farrukhábád rupee.

It would be a difficult task to unravel the progress of deterioration of the currency in the Upper Provinces, the more immediate seat of revolutions in the eighteenth century. But one instance may be given,

[1] बट्टा بٹّا *baṭṭá*, 'difference or rate of exchange.'

[2] Kelly's 'Cambist,' vol. i. p. 94.

in the Najíbábád rupee, as an example of the conduct of all the other mints. One hundred specimens of this species of rupee, of different dates, now current in Murádábád, were selected by the Collector of Bijnor for examination, in 1832. It may be observed, *en passant*, that many of the discrepancies in our Tables between coins of one denomination are doubtless owing to the neglect of noting the dates of their fabrication when sent for assay; the knowledge of the variation in value of the coins of various years, as before stated, led to the system of battá early introduced and fostered by the money-changers, to the perplexity of accounts and money transactions, and the nullification of legislative enactments.

The Najíbábád mint was established by Najíb-ud-daula, the Rohilla chief who exercised so powerful a sway on the fortunes of the last monarchs of Dihlí. The Barellí and Chandausí mints were also under his control. The rupees struck by him and by Zábita Khán were originally of the Dihlí standard: few of these are now met with, as they are in demand for silver ornaments, etc. From the year 26 of Sháh 'Alam (1784-5) to 43 (1801-2) they evince a gradual deterioration, both in weight and fineness. The province of Rohilkhand was, during the whole of this time, annexed to the Súbah of Oudh, as shewn by the symbol of a rohu[1] fish on the field of the coin. The three first assays in the list are from single coins, the remainder are averages.

*Weight, Assay, and Value of the Najíbábád rupee, from* A.D. 1778 *to* 1801-2.

Inscription, the usual Sháh 'Alam distich, year of reign, and Hijra date. Symbols, a fish on the obverse, a crescent on the reverse.

| By whom coined. | San or year of reign. | Weight Troy. | Assay. | Value of 100 in Fd. Rs. |
|---|---|---|---|---|
| Najíb-ud-daula..... | 20 | 173.8 | 11½ Br. | 101 9 8 |
| | 22 | 173.6 | 13 Br. | 102 2 4 |
| | 23 | 172.2 | 15½ Br. | 102 2 6 |
| | 24 | 173.3 | 12 Br. | 101 8 6 |
| Zábita Khán..... | 25 | 172.4 | 10 Br. | 100 2 0 |
| | 26 | 172.4 | 9 Br. | 99 11 0 |
| | 29 | 171.1 | 10 Br. | 99 6 0 |
| Ghulám Kádir ..... | 30 | 171.0 | 5½ Br. | 97 10 6 |
| | 32 | 169.5 | 8 Br. | 97 9 6 |
| | 33 | 170.0 | 7 Br. | 97 7 0 |
| | 34 | 170.2 | 5½ Br. | 96 14 8 |
| | 36 | 170.0 | 7 Br. | 97 10 0 |
| | 37 39 40 | 171.1 | 5 Br. | 97 3 6 |
| | 41 | 169.5 | 3 Br. | 95 7 2 |
| | 42 | 169.3 | 1 Br. | 94 7 9 |
| | 43 | 169.0 | Stand. | 93 14 3 |

[1] S रोहित, روہو

Thus, in the course of twenty-three years, a deterioration of nine per cent. was effected. So gradual a change, however, should rather be ascribed to the malpractices of the mint officers, than to any fraudulent intention of the government.

The Nawáb-Vazír of Oudh had mints also at Lukhnow, Benáres, and Farrukhábád: in these the same process was going forward, until arrested by the successive acquisitions of the English.

The Benáres mint had been established by Rájá Balwant Singh, under a Sanad[1] from Muhammad Sháh, in 1730. It remained under Native management for twenty years after the province was ceded to the Company in 1775. The rupee had the full weight of one hundred and seventy-five grains, and was $2\frac{1}{4}$ per cent. better than the present rupee, or about equal to the Dihlí rupee of that date. It fell in value subsequently about four ánás per cent., and there, of course, remained under English management until it was abolished in 1819, and the Farrukhábád rupee substituted in its stead.

The Lukhnow rupee struck at the Fatehgarh mint had in like manner gradually diminished to 165.2 grains pure, when the Doáb was ceded to the British in 1802, and when it was assumed as the standard rupee of the new territory[2] under the designation of the Lukhnow forty-fifth san sikká, more commonly called the Farrukhábád rupee.

We have thus endeavoured to trace briefly the origin of the three, or rather four, coins chosen for the circulation of the Company's territories, and have explained how it happened fortuitously that the Bombay, the Madras, and the Farrukhábád (or Sonat) rupee are nearly of the same intrinsic value.

| | Pure contents. |
|---|---|
| Arcot rupee | 165 grains. |
| Bombay | 164·7 „ |
| Farrukhábád | 165.2 „ |

The alteration of the standard of purity, in 1818, did not affect the proportion of pure metal, but the facility of equalizing the three coins had been observed both in England and in India; and had been the subject of frequent Minutes by the Court, by the Indian Government, by the Mint Committee, and the officers of the mint; and when Ságar mint was established in 1825, it was ordered to coin new Farrukhábád rupees of one hundred and eighty grains weight, the same as the standard of Madras, or containing one hundred and sixty-five grains pure.

The Benáres mint alone continued to coin Farrukhábádís of 180.234 grains until its abolition in 1829: and the Calcutta mint since coined

[1] سند *sanad*, 'a grant, warrant, charter.'

[2] Reg. XI. 1805.

them of the same weight, until the opportunity was taken finally of equalising the whole by Regulation VII. 1833.

A few words are now necessary to explain the progress of debasement in the coinage of Haidarábád, Nágpúr, Ságar, the Rajpút and other states of Central India, as far as the imperfect data at our command will permit: they are chiefly derived from the reports of the government officers in Ajmír, Málwá, and the Narbadda provinces, to queries circulated through the Mint Committee in 1818 and 1823, when the important question of equalising the coinage of Central India was under agitation.

We have before remarked, that none of the coins now forming the circulation of Hindústán bear any other name than that of Sháh 'Alam, and although we have no perfect information of the origin or date of the mints of Puna, Nágpúr, or of the principal states of Rájpútána, still we may safely assume that, until the authority of Dihlí was annihilated, the representative of the monarch in the various Súbahs, or provinces, alone exercised the privilege of coining: and that even when it was assumed by chieftains already in actual independence, the form of a sanad or permission from the Emperor was obtained by purchase or extortion. The petty Rájá of Dattiah, for instance, was indignant at the supposition that he had opened his mint without authority,[1] and of all the chiefs within Lieut. Moody's agency, Rájá Pratáp Singh of Chatrapúr was the only one who could not produce his authority. The chiefs of Jhánsí and Jálaon cited the sanction of the Peshwá: the Tahrí Rájá, the tacit permission of the English. No notice, however, of mints was found in any of the sanads or treaties to which that officer had access.

When first established, the mints were no doubt in most cases made the source of fraudulent profit to the government, by the issue of a debased coin, which was supported at an enhanced nominal value, through the interdiction of the purer standards of neighbouring districts. A Hindú prince, or the minister who rules for him, is in general a money-dealer; thus at Kotá the executive authority has a shroff in each town, and participates in all the benefits arising out of money operations in the market. In Jaipúr and Kotá there exists an usage that the currency should suffer a depreciation of one per cent. on the third year after its issue, and continue at that rate during the reign of the sovereign: on the accession of his successor, it suffers a further annual fractional depreciation, which operates to bring the whole of the circulating medium into the mint for re-coinage.[2] This rule does

[1] Report of Lieut. T. Moody, agent at Bangál and Kantál, 17th February, 1284.
[2] Major J. Caulfeild, Political Agent in Hároutí, 1st August, 1823.

not, however, extend to the other Rájpút states, nor does any debasement appear in the Kotá rupee to warrant a censure of the system there prevailing. It is such a measure as Tantia Sindia's, who abolished the standard Ajmír currency, and instituted the debased Srísáhí rupee in 1815, on a false supposition of increasing his revenue, that is so pernicious in its effects: or the more inexcusable conduct of the Gwáliár government, which, while maintaining the currency of the capital at a good standard, issues inferior coin at its provincial mints of Chándérí, and even coined debased Bálásáhí rupees at Garrah-Kotá, in imitation of the currency of Ságar.[1]

The list of mints which have sprung up in central India is so formidable that it is difficult to attempt any classification of them.

Mr. Wilder, in 1819, enumerates the following rupees current in Ajmír: old Ajmír, Srísáhí, Kishnagarh, Kochanam, Chittor, Jaipúr, Hálí, Jodhpúr, Oudipúr, Sháhpúrah, Pratápgarh, Kotá, Búndí, and Bhilwárá. Mr. Maddock furnishes an equally long list from the Narbadda: — Panná, Chatrapúr, Saronj, Jhánsí, Chanda, Srínagar, Nágpúr, Garrah-Kotá, Bálásáhí, Ráthgarh, Tahrí, Bhopál, Sohágpúr, Sudhaurah, Jálaon, Ujjain, Isagarh. The difficulty is also increased by the threefold appellations given to coins: first from the place of fabrication, as Indor, Ujjain, Ságar proper, etc.; second, from the person issuing them, as Sindiasáhí from Sindia; Bálásáhí, from Bálájí Pandit; Gaursáhí from 'Alí Gaur, afterwards Sháh 'Alam; Mutí-sáhí, a well-known Allahábád coin of Mr. Achmuty; third, from some distinguishing symbol impressed on the field, as Trisúlí, from the 'trident' of Siva; Shamshírí, from the figure of a 'sword' on the Haidarábád coin; the Machhlísáhí, and Shírsáhí, from the 'fish' and 'tiger' of the old and new Lukhnow rupee, etc. There are also other titles common to different localities, as Chalan, 'current'; Hálí 'of the present time'; and the distinction into Sans, or different years of Sháh 'Alam's reign. It should be remarked that Sháhí and Sáhí attached to the designation of a coin have totally different meanings; the former denoting 'king,' the latter merely 'impress or stamp.'[2]

The following notes concerning the origin of particular mints, and the amount of their issue, are derived, as before stated, from the reports of Messrs. Wellesley, Molony, Wilder, Maddock, Macdonald, Caulfeild, and Moody, between 1819 and 1823.

In Ajmír the Srísáhí rupee, coined by Tantia, formed in 1815 the principal currency; it has been partially supplanted by the Farrukh-

[1] Maddock, 12th June, 1819.

[2] It is, however, doubtful whether the terminal *sáhí* is not a mere vulgar application of *sháhí*, the original distinction of rupees being solely into those of different sovereigns.

ábád rupee since the province came into our possession. In Kotá there are three mints, at Kotá, Jantia Patan, and Gangroun, coining on an average thirty-six lákhs per annum: the currency is not debased.

The Holkar currency of Indor, Hardá, and Maheswar, and the Ujjain rupee, are nearly at par with the Farrukhábád, but they maintain an unequal contest with the Sálimsáhí rupee, coined by the Rájá of Pratápgarh, of which there are three kinds, the jurmurea, 150 grs. pure; the murmurea, 145 grs. pure, coined in 1810; and the melah of 1820, only 137 grs. pure.[1] The Rájá engaged in 1821 to reform his coinage, but it has never been done.

The Búndí debased rupee is also current about Ujjain. It seems by the Assay Table to have been reformed in 1825.

The northern parts of the Narbadda territories were supplied with a base currency struck at Jabalpúr, by Nána Ghatka, in 1800; this mint was suppressed on cession to the English. The southern part (Dakhantír) had a rupee of still lower value struck at Soházpúr, where a mint was established in 1810; it was abolished in 1818 by Mr. Molony.

These rupees passed at par with Chanda and Nágpúr rupees, the chief issue of Berár.

The Ságar mint was set up in 1779, by the Peshwá's officer at Garrah Mandlah, and coined about seventeen lákhs of Bálásáhí rupees per annum. Its operation continued under Mr. Maddock, who, to counteract the forgery going on at Garrah, inserted the word 'Sagar' in small English characters on the die. The new Ságar mint, erected in 1824, is now rapidly removing all the old coins from circulation.

The standard of the Maráthí Government of Nágpúr, to which all the neighbouring mints were, doubtless, intended to conform, presents, itself, one of the worst examples of irregularity and depreciation. Even after the establishment of a British Residency, having a nominal control over such matters, a further debasement to the extent of eight per cent. is proved to have been effected, owing to the vicious policy of farming the mint to a native contractor for an annual sum of 35,000 rupees.

In the Haidarábád country, the government of the Nizám, or of his Hindú minister, has not been behind hand with its Maráthí rivals in the adulteration of the local currency. The weight of the rupee (174 grains) shews its original agreement with the Dihlí standard, but the pure metal is gone down to 147 grains; and by way of introducing greater confusion and vexation, there is a superior currency for the Palace and the Residency, an inferior for the city, and a hukm chalaní,

[1] A. Macdonald, 13th August, 1823.

or forced token, the precise nature of which is dubious; the worst species are struck at Náráyanpat.

In Bandalkhand, the circulation consisted chiefly of Bálá Ráo's rupee, struck at Srínagar, near Panná. This mint issued at the time of its institution, in 1794, about eighteen lákhs per annum; but after 1819, the coinage fell to four lákhs. The same prince set up a mint at Jálaon, his capital, in 1809: its issue was, at first, six lákhs, and is now diminished to one-third of that amount.

The Hansí mint of Ráo Rám Chand dates from 1780: it issued three lákhs. Kuár Pratáp Singh's at Chatrapúr dates from 1816. It is said that Chatra Sál used formerly to coin there.

The mints of Panná (1780) and Samter (of 1808) were on a most insignificant scale, and have been put down. The Dattiah mint, already mentioned, dates from 1784.

With a view to the reform, in part, of this complicated system, of which a few points only have been brought to view, the Government resolved on the 10th September, 1824, to abolish the Panná, Hansí, Jálaon, Urcha, and Chatrapúr mints, and to effect a reform of that of Pratápgarh; the order was enforced in December, 1826. The Bhopál Nawáb also engaged to equalize his rupee with that of Indor and Ujjain, and to abolish the Bálásáhí mint. It was thought too great a step to attempt a restoration of the Nágpúr and Haidarábád currencies; and as the silver in them averaged 144 grains, while that of our rupee was 165, it was proposed to engage the Nágpúr Rájá to coin fourteen-áná pieces; and the Narbadda Commissioner was empowered to do the same for Jabalpúr and Ságar: but he had already made an arrangement,[1] which, while it relieved the ryots, served to introduce the new sixteen-áná rupee with facility: this was to receive, for all settlements made in the local currency, 100 Farrukhábád rupees for every 120 Nágpúrís[2]; their intrinsic equivalent being 118½. Were the same principle acted upon in the Nágpúr and Haidarábád states, there could be no difficulty in accomplishing the object so much desired. As for the numerous tributary and subsidiary states, there could be no injustice in refusing them the privilege, which is of little profit, and which is in general a modern usurpation on their parts: at any rate they might be obliged to conform to the universal standard. 'We are too apt,' says Mr. H. Mackenzie, 'to let the mere exemption from the printed code be taken as an exemption from all law, and to deny to a large portion of India the benefits it would derive from the just discharge of the duties belonging to the paramount power.'[3]

[1] Maddock, 3rd February, 1827.

[2] The same rate is used in paying the Bombay troops at Aurangábád, in the Govind Bakhsh, or Haidarábád currency.

[3] Mint Committee Records, September, 1824.

The standard of Panná, under the Peshwá, was called the Ankusí rupee, from ánkus,[1] the instrument used by the mahout to guide the elephant; probably a symbol marked on the coin. This rupee appears from Kelly's tables to have been extensively adopted as an unit in the estimation of value and weight, probably wherever the Maráthí ascendancy prevailed. It is current through the Dakhan and the Konkan. The Chanda rupee of Khándísh circulates at par with it. In Gujarát there are several denominations of rupees, but the principal is the Bálásáhí, coined at Baroda.

It is not necessary to allude to the Patiyálá, Bhartpúr, Díg, and many other rupees, the names of which denote their origin and their place in the General Table. Still less need we advert to the Korá, Allahábád, Agra, Saháranpúr, Barellí, Kálpí, Atáwi, Mathurá, Pánípat, and other rupees, which belong more immediately to the Dihlí group, coined only on particular occasions or for short periods, and the mints of which have long since disappeared from our list.

There are, however, to the eastward in Assam a distinct class of coins bearing, in a Bengalí inscription, the name of the Rájás of that province, since the time of Rájá Rudra Singh. They present an example of good faith in these rude people, being in weight and purity equal to the former Arcot rupee of Dacca, and some degree better than the present Farrukhábád rupee.

The circulating medium of Nepál is also essentially Hindú, and of such interest on that account, that we gladly avail ourselves of the permission to insert an account of the coinage of that state, drawn up by Doctor J. M. Bramley, in 1831.

## COINAGE OF NEPÁL.

"The conquest of Nepál by the Goorkhas took place in the Newar year 888, corresponding with A.D. 1768. Prior to this epoch, the valley of Kathmandu was divided into three sovereignties, Patan, Bhatgaon, and Kathmandu, each governed by a Rájá: hence on the Newar coins the three series of Rájás' names are found. Those of Bhatgaon are generally (though not always) distinguished by a shell, those of Patan by a tirsool, and those of Kathmandu by a sword.

"It was formerly the custom for all money current north of the valley of Nepál, so far as the boundaries of Chinese Tartary, to be coined by one or more of the Nepál Rájás, which was a source of considerable profit to them: the Bhoteahs giving them weight for weight in silver and gold dust; but this was discontinued during the reign of

[1] S آنکس (अङ्कुश)

Ranjít Mal, the last reigning Rájá of Bhatgaon, who sent them such base coins as to occasion a decrease of nearly one-half of their intrinsic value, which was no sooner discovered by the Bhoteahs than a desertion of the mint took place, and there has been no more Bhote coinage made in Nepál.[1] The amount contracted for on this occasion was ten lákhs of silver mohurs, exactly similar to those current in Nepál. The Bhoteahs, who now visit Nepál for trade, profit by this spurious coin, which they take in exchange for their goods at five gandas per muhr, and they pass off in their own country as of full value, or ten gandas. As the Bhoteahs have no other currency, they are compelled to cut them into halves, quarters, and eighths. They are the only coin current in Lassa.

"The old coins of the 'Mals,' or Newar Rájás, are much valued for their purity, and are worn by the women, strung to necklaces or armlets, as tokens in memory of their ancestors.

"Since the Goorkha conquest, the Vikrama era has superseded that of Newar for ordinary purposes; and the Sáka, commonly used in Hindústán, has been introduced upon the coins. Rájá Pritinarain is the first Goorkha sovereign, from whose accession a regular series may easily be obtained. The inscriptions on the present prince's coins are *Srí Srí Srí Rájendra Vikrama Sah Deva*, 1738; and on the reverse, *Srí Srí Srí Gorakhnáth Srí Bhayani*.

"The gold and silver coins have the same names and divisions differing only slightly in weight.

| Takka. | | Mohur. | | Sooka. | | Annee. | | Pysa. | | Dam. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | = | 2 | = | 4 | = | 16 | = | 80 | = | 400 |
| | | 1 | = | 2 | = | 8 | = | 40 | = | 200 |
| | | | | 1 | = | 4 | = | 20 | = | 100 |
| | | | | | | 1 | = | 5 | = | 25 |
| | | | | | | | | 1 | = | 5 |

"The mohur or eight-anna piece is the principal coin in use: it weighs 87 grains, and is therefore evidently identical with the Muhammadan half-rupee, but the quality of the metal has been much adulterated.

"The Nepálese procure all their silver from China, in the form of stamped lumps, as they are current in Lassa: for the Tibetans generally follow the Chinese custom in their money transactions of paying and receiving by weight, and the merchants carry scales with them for the purpose."

There are a few specimens, however, among Dr. Bramley's collection

[1] Mr. Csoma de Körös states that the English rupee circulates freely through Western Tibet.

of a Tibetan silver coinage struck at Lassa, having an inscription in both Chinese and Tibetan characters. Mr. Csoma de Körös interprets the purport of the Tibetan legend on one of these to be *G'tsang pahu*, 'pure piece;' or, as 'G'tsang' is the name of a large province in Tibet, lying next to Nepál, it may mean 'Tsang money.' It likewise bears a name, variable on different specimens, of former Emperors of China, B'chah-H'chhin and Chhan-lung. Besides this, in letters also, the date (25, 59, 60, etc.) of the Tibetan or Chinese cycle of sixty years.

The common Chinese brass money, with a square hole in the centre, is likewise current in Lassa, as generally through the whole of the Chinese empire.

Although not quite relevant to the subject of Indian coin, still, as Chinese silver forms so considerable a portion of the bullion importation of Calcutta, we may be permitted to insert a brief account of the Chinese system, from that useful compendium, the 'Companion to the Anglo-Chinese Kalendar,' for 1832.

## CHINESE CURRENCY.

Sycee silver, in Chinese 'Wan-yin,' is the only approach to a silver currency among the Chinese. In it the government taxes and duties, and the salaries of officers, are paid; and it is also current among merchants in general. The term Sycee is derived from two Chinese words, *Se-sze*, 'fine floss silk,' which expression is synonymous with the signification of the term 'Wan.' This silver is formed into ingots (by the Chinese called shoes[1]), which are stamped with the mark of the office that issues them, and the date of their issue. The ingots are of various weights, but most commonly of ten taels each.

Sycee silver is divided into several classes, according to its fineness and freedom from alloy: the kinds most current at Canton are the five following:—

1st. Kwan-heang, 'the Hoppo's duties,' or the silver which is forwarded to the imperial treasury at Peking. This is ninety-seven to ninety-nine touch. On all the imperial duties, a certain per-centage is levied for the purpose of turning them into Sycee of this high standard, and of conveying them to Peking without any loss in the full amount. The Hoppo, however, in all probability increases the per-centage far above what is requisite, that he may be enabled to retain the remainder for himself and his dependants.

2nd. Fan-koo or Fan-foo, 'the treasurer's receipts,' or that in which the land-tax is paid. This is also of a high standard, but inferior to that of the Hoppo's duties, and being intended for use in the

[1] By the natives of India खुर, کھرک *khurí*, or 'hoofs.'

province, not for conveyance to Peking, no per-centage is levied on the taxes for it.

3rd. Yuenpaou or Une-po, literally 'chief in value.' This kind is usually imported from Soochow, in large pieces of 50 taels each. It does not appear to belong to any particular government tax.

4th. Yen or Eem-heang, 'salt duties.' It is difficult to account for these being of so low a standard, the salt trade being entirely a government monopoly. This class is superior only to

5th. Mŭt-tae or Wuh-tae, the name of which, signifying 'uncleansed or unpurified,' designates it as the worst of all. It is seldom used, except for the purpose of plating, or rather washing, baser metals.

The tael of Sycee in the East India Company's accounts is reckoned at 6*s.* 8*d.* sterling. When assayed in London, this metal is frequently found to contain a small admixture of gold. Mercantile account sales give the following average out-turn of China bullion remittances to London, Calcutta, and Bombay; that

100 taels of Sycee yield { £316., at 5*s.* an oz. (including $1\frac{1}{2}$ per cent. for gold.
3078 sikká. Rs., or with charges 3062 Rs., at Calcutta.
3335 Bombay Rs., or „ 3302 Rs., at Bombay.

### AVA SPECIE.

The Burmese, it is well known, have no coined money, but, like the Chinese, make their payments in the precious metals by weight. Like the latter nation, also, they make use of decimal divisions in estimating the value or purity of gold and silver, and their systems of weights and measure follow the same convenient scale. We are indebted to Major Burney, Resident at Ava, for the following particulars:

Vis, Tikal, and Moo are the general terms used in the transactions of commerce and accounts: their subdivisions and multiples are—

1 pe or be.
2 = 1 moo.
$2\frac{1}{2}$ = 1 mat.
5 = 2 = 1 hkwe.
10 = 4 = 2 = 1 kyat or tikal.
1000 = 400 = 200 = 100 = 1 peiktha or vissom.
(100 tikals are precisely equal to 140 tolás).

The expressions employed by the goldsmiths in declaring the quality of bullion require a knowledge of the Burmese numerals, and a few other words:

| NUMERALS. | | METALS. | ASSAY TERMS. |
|---|---|---|---|
| 1. Ta. | 6. Khyouk. | Shwe, gold. (Shwence, red | Det, better or above. |
| 2. Nheet. | 7. Khwon. | or pure gold.) | Mee, differing × or —. |
| 3. Thoun. | 8. Sheet. | Ngwe, silver. | Meedet, better in assay. |
| 4. Le. | 9. Ko. | Ge or khe, lead or alloy. | Mee shyouk, worse ditto. |
| 5. Nga. | 10. Tshay. | Nee, copper. Byoo, tin. | Ma, adulterated. |

The usual weight of the small lumps of silver current in the place of coin is from twenty to thirty tikals (thirty or forty tolás): they bear a variety of names from their quality and appearance, the figures given by the action of the fire upon a thick brown coating of glaze (of the oxydes of lead and antimony) answering, in some degree, the purpose of a die impression.

*Ban*[1] signifies 'pure' or 'touch,' and is the purest obtainable of the Burmese process of refinage.

*Kharoobat*, 'shelly' or 'spiral circled,' is applied to a silver cake, with marks upon its surface, produced by the crystallization of the lead scoria in the process of refinement: it is supposed to denote a particular fineness, which, by Burmese law, ought to be ten-ninths yowetnee in value, *i.e.*, nine tikals of kharoobat pass for ten of yowetnee silver; or it should contain nineteen and a quarter ban and three-quarters copper.

*Yowetnee*, 'red-leafed' flower or star, silver, is so named from the starry appearance of the melted litharge on its surface. Yowet is a corruption of *rowek*, 'leaf,' and the word is sometimes written by Europeans rowanee, rouni, roughanee, etc. Yowetnee is the government standard of Ava, and contains by law eighty-five ban and fifteen alloy per cent. Taking it at nine-tenths of purity of kharoobat, which last is 94.6 touch, its quality will be 85.2 fine; which closely accords with the legal value. The average of 60,000 tolás of yowetnee in the late Ava remittance turned out two dwts. worse (90.8), but there was a loss of more than one per cent. in melting, from the exterior scoria.

*Dain*, the most common form of bullion met with in circulation, is so called from an assessment, levied during the late king's reign, upon villages and houses: *dain* signifying 'a stage,' or distance of two miles. These cakes also weigh from twenty to thirty tikals each. Their prescribed legal quality is ten per cent. better than yowetnee, which puts this species of silver on a par with kharoobat. In practice, however, the quality varies from one to ten per cent. better (five Br. to thirteen and a half Wo.) than Calcutta standard. The average of fifty-two lákhs of dain turned out three pennyweights Br.

There is an adulterated dain silver, stated by Major Burney to be similar in quality to yowetnee, but in reality much worse (forty-two and a half pennyweights worse) lately introduced and extensively circulated: it is made by admixture of lead, and is called Ma-dain.

The following will serve as examples of the mode of evaluating bullion:

[1] This word is synonymous with the 'Baní' of the 'Ayín-i Akbarí:' Banwárí is the Indian name of the touch needles used in roughly valuing the precious metals.

Dain, ko-moo-det, is Dain nine per cent. better. (See previous explanation.)
„ nga-moo-det, „ five per cent. better.
Yowetnee, „ standard. (Eighty-five touch.)
„ Kyat-ge, or ta-tshay-ge, one tikal or tenth of alloy (meaning one-tenth weight of alloy added to standard).
„ Kyouk-tshay nga-kyat-ge, six tens five tikal alloy (meaning sixty-five per cent. of alloy added).
„ gyan, half yowetnee (and half alloy).

Gold. The purity of gold is expressed by moos or 'tenths' only: ten moos, 'tshay moo,' (one hundred touch) being esteemed pure gold.

'King's gold,' or standard, is called Ka-moo-ta pe-le-yowe (nine moos, one pe, four seeds), or nine and three-quarter moos fine.

'Merchants' gold' is Ko-moo-ta-be, nine and a half moos fine. Gold muhrs are called eight and a half moos fine by the Ava assayers.

The out-turn of the Ava specimens will be given as an Appendix to the General Table.

Having now adverted to most of the groups and denominations of money, which are comprised in the following tables, it remains merely to explain the sources whence the materials for them have been collected. For the coins of the West of India, Mr. Noton's table, published at Bombay, in 1821, has been consulted, and, for India generally, the table published in Kelly's 'Cambist,' from the assays of Mr. Bingley, at the Royal Mint; but the principal portion is derived from the table printed, but not published, by Mr. H. H. Wilson, Assay Master at Calcutta, in 1833, from his own assays: indeed, almost all the coins inserted in the table have been frequently assayed, and generally in large parcels, at the Calcutta, Benáres, and Ságar mints.

As Mr. Wilson's table gives the value in sikká rupees (of 191.916 grains troy), it has been necessary to recalculate the whole column of produce, which now, in the Silver Table, expresses the value of one hundred of each species of coin in the general standard British rupee of one hundred and eighty grains. To find their value in sikká rupees (of one hundred and ninety-two grains) it is only requisite to divide the Farrukhábád value by sixteen, and deduct the product, as explained in page 7.

The weight and pure contents are expressed in troy grains. The standard or assay is given both according to the decimal system and in the usual terms of assaying; viz., in carats, grains, and quarters, for gold,—and in pennyweights and halves for silver,—better or worse than the standard of the Company's coins, namely, eleven ounces fine and one ounce alloy.

The silver pound is divided into twelve ounces, or two hundred and forty pennyweights, or four hundred and eighty halves.

The gold pound into twenty-four carats, or ninety-six carat grains, or 384 quarters.

The 'intrinsic value' of the coins is the relative value of their pure metal, as compared with the pure contents of the gold muhr and the rupee. The mint price is two per cent. less, besides the charge for refinage, according to the quality of metal, as stated in pages 9 and 12.

To find the value of any number of rupees, follow the rule before laid down; namely, multiply by the figures in the column of produce and divide by one hundred. For gold coins, if required in rupees, multiply further by the Regulation value, sixteen for the Calcutta, or fifteen for the Madras muhr; or if the bazar price be wanted, by the bazar price of the gold muhr for the time being. The decimal parts of the muhr and rupee may be converted into ánás and pá'ís by the Table, page 12.

It should be remarked, that the following tables are not intended as an authoritative list of the rates at which the various coins are received by Government, but solely to shew their average intrinsic produce when brought to the mint as bullion to be converted into Farrukhábád rupees. Particular rules have been at different times promulgated, fixing the exchange at which military and other payments were to be made, and revenue to be received, in different currencies.

Such was the list published in Regulation III., 1806, which is now obsolete, being inconvenient in application, from its specifying the value by weight, and not by tale.

The following rules are still in force at the Government treasuries of the Bengal Presidency: the first has reference to the old current rupee of account, of which one hundred and sixteen were equal to one hundred sikkás: this imaginary money is now disused, except in the valuation of some few articles of the English market in the price current.

In the payment of troops and others connected with the Military Department,

111 sikká rupees, = 116 Sonát or Farrukhábád rupees.

325 „ = 350 Madras and Bombay rupees.

In payments to others not in the military service,

100 sikká rupees, = 104½ Farrukhábád or Sonát rupees.

The established rates of battá on local currencies, fixed for the guidance of revenue officers, are as follows:

Benáres and Gaurshábí rupees, at par with Farrukhábádís.

| | | | | | | |
|---|---|---|---|---|---|---|
| 104 | Barellí rupees, | = 100 | Farrukh. Rs. | under | Gov. Orders, | 1st July, 1833 |
| 103¼ | Old Farrukhábád, | = 100 | „ | „ | „ | 29th Jan. 1833 |
| 103¼ | Dihlí, 38th san, | = 100 | „ | „ | „ | „ |
| 101 | Muhammadsháhí, | = 100 | „ | „ | „ | „ |
| 101 | Old Lukhnow, | = 100 | „ | „ | „ | „ |
| 106 | Najíbábád, | = 100 | „ | „ | „ | 1st July, 1833 |
| 106 | Chandausí, | = 100 | „ | „ | „ | „ |

| | | | |
|---|---|---|---|
| 120 | Chanda rupees, | = 100 Farrukh. Rs. ..... | |
| 120 | Nágpúr Rs. viz. Mehrú, Nishandár, Dobúndyá, Jabrá, Manjhúlá, 7 san, Chhapá, Old Biná-san, | = 100 do. | Under Government Orders, 19th August, 1833. The receipt of these coins at this rate, however, is limited to the public treasuries in the Baitúl, Seoní, and Hoshangábád districts. |
| 120 | Jabalpúr rupees, | = 100 Fd. rs. ..... | |
| 100 | Arkát rupees, | = 88¾ sikká rupees, ..... | For Chittagong and Ballúah, 22nd Jan., 1833. |
| 120 | Haidarábád rupees, | = 100 Bombay rupees, for payment of troops, etc. | |
| 100 | „ | = 83 r. 14 a. 3 p. sikká, ... | For adjustment of accounts of Haidarábád Residency. |

100 The Ikkerí, Bhol, Bholpádí, Bahádurí, and Farrukhí pagodas are taken at 387.2 Ankusí rupees at the Púna treasury.[1]

100 Gaddopádí, Tadak, Kadvanajá, Hálí, Modápadí, and Bangalore pagodas, at 375 Ankusí rupees.

100 Muhammadsháhí and Venkatapatí, at 337.2 ditto.

100 Rájáram Ikkeri pagodas, = 381 „

100 Bhatorí ..... = 325 „

100 Tomancein..... = 203 „

100 Harpanhálí ..... = 343.3 „

### NATIVE COPPER COINS.

Our information regarding the copper coin in circulation throughout Central India is very limited, but it is well known that as much perplexity exists in the varieties of paisá, and in the greater range of their value, as in the coins of the more precious metals; so that every town and village almost has its separate currency, and its established nirkh,[2] or, rate of exchange, with the rupee, to the great inconvenience of the traveller and of the poorer classes. In weight they vary from 280 grains (the Jaipúrí, etc.) to 84 grains (the Maiwárí): the former passing at about 35, the latter at 378, paisá for a rupee. From the small advantage of melting up copper money, it happens that much of the circulation in this metal is of very great antiquity; and not only many ancient Hindú coins are met with, but Bactrian and Roman copper coins are also frequently procurable at fairs and in the neighbourhood of old towns in Upper India.

The paisá was in some cases adopted as the unit for determining the larger weights of the bázárs, as the Gorakhpúr paisá, of which 530 were held equal to a passerí[3] (five sers) at Gházípúr, and generally through the Benáres province. 2881 'chalans'[4] of Fatehgarh in like

[1] Noton's table, 4th Aug., 1821. He states, however, that the rates may have varied since 1812, when they were established.

[2] P. نرخ [3] پانچ سیر [4] S. चलन چلن

manner were assumed as the weight of a *man* in that district. The Dihlí paisá, coined till 1818, was twelve máshas or one tolá in weight.

The Table at page 62 contains such a list of copper coins as the scanty materials at hand enables us to supply. Most of the native paisá contain more copper in proportion to their value than the present Company's coin, which was, however, originally one tolá in weight, and was gradually reduced to one hundred grains (as shown in the table); it is at present in fact a government token, worth, intrinsically, less than its nominal value.

Within the Ceded Territories the native coins still predominate, but the Company's paisá is now gradually spreading to westward, and the Ságar mint has for several years been employed in converting the native copper money into Benáres or trisúlí paisá of one hundred grains weight, and sixty-four to the rupee. At Bombay, the old paisá have been bought up by Government, for the purpose of removing them entirely from circulation, and substituting the new coin (described in page 4). The Bengal Government have also recently adopted a measure tending to withdraw the trisúlí paisá (see page 8) from circulation, in consequence of their becoming much depreciated in public estimation from a large admixture of spurious coin, and other causes; the Calcutta mint being ordered to grant sixty-four new paisá for seventy-two trisúlís, for an amount not under twenty rupees in value brought for exchange.

## SYMBOLS ON SHÁH 'ÁLAM COINS.

It may naturally be asked, how the multitude of coins, gold, silver, and copper, included in the following lists, are to be recognised by any but a professed money-changer, since, as has been observed before (page 19), most of them bear the mere name and distich of Sháh 'Alam, and the place of coinage, being the lowermost word of the inscription (page 2), will seldom be found on the face of a coin showing, as is generally the case, only a small portion of the die. Many mistakes have doubtless been made in fixing the localities of coins, from this abundant source of error, and it is much to be regretted, that it has not on all occasions been made a primary point to ascertain the distinguishing mark of every specimen collected for examination.

Some rupees (as the Sálimsáhí, etc.) appear to be only distinguished by the peculiar imperfections of the Persian character they bear; others have but a few discriminating dots, like the private marks of our own mints; but the majority have a well distinguished symbol, the same on silver and on copper, by which they may be readily known on inspection. There is a further advantage in con-

sulting such marks, for they enable us at once to class together various coins as having been issued by the same authority. A list and plate of these symbols, confessedly imperfect, follows the catalogue of coins, but it may be convenient to assemble together here a few of the groups, whose connection is otherwise confirmed by the preceding remarks on the Bundelkhand and Rájputána mints.

The coins of Lukhnow, Fatehgarh, Azimgarh, Barellí, Najíbábád, Benáres, and other places under the súbah of Oudh, bore the symbol of a rohu fish. The Agra paisá has a pistol.

The coins of Rohilkhand, Bhartpúr, Narwar, etc., a dagger.

Those of Nágpúr, Chanda, Haidarábád, Aurangábád, etc., a sword, hence called 'shamshírí.'

Those of Ságar, Jálaon, Srínagar, Kálpí, Tahrí, (the Bálásáhí) have a trident or trisúl with a cross bar.

The coins of Bhopál, Bhilsá, and Ráthgarh are easily known by a rude figure resembling a coat of mail.

The Kotá, Búndí, and Pratápgarh coins have a triple bow or knot, sometimes varied: the inscription of the latter rupee is in Nágarí.

The Saronj, Vazírsáhí, Jhánsí, Gokul, Balúgarh, and Gwáliár moneys have a cinque-foil or star of five triple-pointed leaves, placed, as most of such devices are, in the loop of the letter س *s* in جلوس

The Ajmír, Oudipúr, Sálimsáhí, old Chitor, Bhilárá, and Krishnagar coins; and, with some modification, those of Jaipúr and Mattrá, have a جھاڑ *jhár*, 'sprig' or six-leafed branch.

Those of Madras, Arkát, Chandor, Sháhpúr, have a small lotus or trefoil.

The Jodhpúr, Kochámán, Bapúsáhí, and Pálí rupees have a kind of small sceptre following the *alif* of the word شاہ, *sháh*.

The Indor rupee is well characterised by the solar effigy of the Suraj-vansí princes; the Maheswarí of Holkar by the symbol of Mahádeva; while the Srísáhí of Ajmír has the word श्री *srí* on the field.

The Jabalpúr rupee is distinguished by bearing the san or year of reign in Nágarí characters. That of Ujjain has merely four squares, or a kind of chequer.

The crescent and star are common emblems on many coins.

Of the Nepálese, Assamese, and other peculiar types, a better idea will be formed from the outlines in the accompanying plate: but the following memoranda[1] of the symbols on the pagodas of Southern India will be useful, as we have no specimens whence to delineate them:

[1] Extracted from a note of Mr. Wilson's 'Cabinet Specimens.'

DEVICES ON COINS OF SOUTHERN INDIA.

Madras pagoda, Pulk Bunder do. Venkatapati do. — The figure of Venkateswara, and Alamelu and Mangamá his two wives.

Harpanhálí, Scott, Portonovo, Sravanorí, Sáhibarí, Jamsherí, — A rude figure of Nrisinha, Lakhsmí Nrisinhá, and on some also Pratápa Krishna.

Ikkerí, Contaráí, Maisúr, the figure of Umá Maheswara.

Haidarí, Sultání, Bangalore, etc.—the letter ट.

Dúrghí, Chítaldrúg, the lotus. The Shúlí pagoda;—the trisúl.

Tanjore, Gapállí, Gattí, the Kattár or dagger.

Víraráí, Panchakal, Giriye; a guń.

Chakrí, a Tripati coin; a diagram on one side and Tripundra on the other.

Gulgi fanam;—a plough.

TABLES OF BULLION IMPORTED, EXPORTED, AND MINTED.

As a matter of curiosity rather than with a view of furnishing data for calculating the numerical amount of the circulating medium of the provinces under the Bengal Presidency, a statement has been added in two tables[1] of the quantity of gold and silver bullion coined at the mints of Calcutta, Benáres, Farrukhábád, and Ságar respectively, from the year 1800, to the 30th of April, 1833, inclusive; and also a statement of the imports and exports of bullion at Calcutta, extracted from Wilson's report on the commerce of the port, printed in 1828, the years since expired being added from the same official records. It will be remarked that of the whole bullion minted, a large proportion has been 'on account of Government.' This has chiefly consisted of the re-coinage of worn-out rupees or the conversion of native coins, remitted from the different treasuries, into Government standard. The same process must be continually going forward, inversely, with the English coin in all the native states, so that it becomes impossible to estimate correctly the quantity in actual circulation.

The total value of the coinage at the four mints for the period of thirty-one years has been 53,322,600 rupees.

The bullion importation, *vid* Calcutta, from 1813-14 to 1831-32 is valued at ..... sikká Rs. 355,837,644

From which deducting the exports for the same period, 65,391,544

Leaves bullion disposed of in the country ..... sikká Rs. 290,446,100

[1] [These are omitted as the totals and results are incorporated in the succeeding observations.]

The coinage of the several mints for the same term of eighteen years was as follows:

| | | | |
|---|---|---|---|
| Calcutta mint | 203,615,962 | 4 | 5 |
| Benáres mint | 88,329,359 | 0 | 6 |
| Farrukhábád mint | 47,252,842 | 9 | 11 |
| Ságar mint | 4,324,775 | 9 | 9 |
| Making altogether, fractions omitted | | | 343,522,940 |

Being an excess of one-fifth above the import, or ..... Rs. 53,076,840

The coinage of the native mints may be jointly estimated at one-half of our own, which will give a rough total of 50 karors of rupees for 18 years, or three karors per annum for the coinage of the Bengal Presidency; being 150,000 per diem for 200 working days.

## TABLE *of the Gold Coins of India.* ✓

| Denomination. | Weight in grains. | Assay in car. grs. | Touch or pure gold in 100 parts. | Pure contents in grains. | Intrinsic value of 100. | | Remarks. |
|---|---|---|---|---|---|---|---|
| | | | | | In Calcutta Gold Muhrs. | In Madras or Bombay gold rupees | |
| MUHR. | | car.grs. | | | | | [1750. |
| Ahmad Shâh .... | 207.00 | W.1 $2\frac{1}{4}$ | 85.1 | 176.27 | 93.937 | 105.874 | Coined at Dihlí, |
| Akbar ..... | 159.00 | B. 2 0 | 100.0 | 159.00 | 84.732 | 96.361 | ditto at Agra, 1560 |
| Akbar, jaljaláli.. | 186.60 | B. 2 0 | 100.0 | 186.60 | 99.430 | 113.089 | ditto at Láhor. |
| Assam..... | 173.50 | W.5 $0\frac{3}{4}$ | 70.0 | 121.54 | 64.769 | 73.662 | |
| „ old..... | 173.00 | W.2 $2\frac{1}{4}$ | 81.0 | 140.11 | 74.666 | 84.921 | |
| Benáres ..... | 168.44 | B. 1 1 | 96.9 | 163.17 | 86.956 | 98.896 | |
| Batavian, 1783... | 242.60 | W.3 $1\frac{1}{4}$ | 77.9 | 188.90 | 100.665 | 114.479 | Dutch E. I. Comp. |
| „ 1796... | 243.60 | W.4 0 | 75.0 | 182.70 | 97.361 | 110.725 | |
| ..... | 244.25 | W.5 0 | 70.8 | 173.01 | 92.198 | 104.857 | |
| Bombay, old..... | 177.00 | B. 0 $3\frac{1}{2}$ | 95.4 | 168.70 | 89.903 | 102.243 | |
| „ later..... | 174.99 | W.2 0 | 83.3 | 145.82 | 77.709 | 88.377 | |
| „ newstd.1800 | 179.00 | B. 0 $0\frac{1}{4}$ | 91.9 | 164.68 | 87.759 | 99.807 | Legal exchange |
| „ do. 1830 | 180.00 | standard | 81.7 | 165.00 | 87.929 | 100.000 | value, 15 Bom.Rs. |
| Calcutta, old std. | 190.804 | B. 1 $3\frac{1}{4}$ | 99.2 | 189.40 | 100.934 | 114.786 | Still coined here. |
| , new std. | 204.710 | standard | 91.7 | 187.65 | 100.000 | 113.727 | Legal value, 16 Rs. |
| Dihlí ..... | 167.00 | B. 1 $2\frac{1}{4}$ | 98.2 | 163.96 | 87.373 | 99.364 | Date not given. |
| Haidarábád..... | 172.18 | B. 1 $0\frac{1}{4}$ | 96.1 | 165.45 | 88.171 | 100.263 | |
| Jainagar..... | 174.99 | B. 0 2 | 93.7 | 164.05 | 87.428 | 99.398 | Struck at Jaipúr. |
| Lukhnow..... | 166.00 | B. 1 $3\frac{1}{4}$ | 99.2 | 164.70 | 87.771 | 99.820 | Pure contents as in silver coin. |
| Madrasgoldrupee | 180.00 | standard | 91.7 | 165.00 | 87.929 | 100.000 | Legal value, 15 Rs. |
| Puna muhr ..... | 159.55 | B. 2 0 | 100.0 | 159.55 | 85.023 | 96.694 | |
| Rási ..... | 167.50 | B. 0 $3\frac{1}{4}$ | 95.1 | 159.21 | 84.845 | 96.486 | |
| another | 121.65 | W.4 $3\frac{3}{4}$ | 71.1 | 86.48 | 46.087 | 52.325 | |
| Sháh'Alam,1770 | 190.25 | B. 1 $2\frac{1}{4}$ | 98.2 | 186.80 | 99.547 | 113.212 | From Kelly. |
| another | 191.00 | B. 1 $2\frac{3}{4}$ | 98.7 | 188.50 | 100.453 | 114.236 | Current in Súrat |
| Sunamula..... | 178.26 | W.0 $0\frac{1}{4}$ | 91.1 | 162.47 | 86.582 | 98.465 | [and Gujarát. |
| Súrat (average).. | 178.00 | standard | 91.7 | 163.17 | 87.307 | 99.307 | |
| Sháh Jahán..... | 168.00 | B. 1 $3\frac{3}{4}$ | 99.8 | 167.60 | 89.315 | 101.575 | Having signs of the zodiac—rare. |
| PAGODA, HÚN, OR VARÁHA. | | | | | | | [still coined. |
| Anandrái ..... | 52.46 | W.4 $3\frac{3}{4}$ | 71.1 | 37.30 | 19.876 | 21.708 | Travancore Rájá, |
| Bangalor..... | 52.87 | W.2 $2\frac{1}{4}$ | 81.0 | 42.82 | 22.818 | 25.952 | Under Haidar. |
| Bahádurí (Haidar) | 52.71 | W.1 $2\frac{3}{4}$ | 84.6 | 44.61 | 23.775 | 27.032 | At Seringapatam,' 1760 |
| Dharwâr ..... | 50.52 | W.3 3 | 76.0 | 38.42 | 20.473 | 23.280 | In Karnátic, scarce |
| Darbárí..... | 50.53 | W.2 $2\frac{1}{4}$ | 81.0 | 40.96 | 21.830 | 24.827 | Maisúr. |
| Durgí pagoda ... | 51.55 | W.2 1 | 82.3 | 42.42 | 22.606 | 25.714 | Coined at Chítal- |
| another | 51.46 | W.4 $0\frac{1}{4}$ | 74.7 | 38.46 | 20.496 | 23.315 | drúg. |
| Farrukhí (Calicut) | 52.90 | W.1 $1\frac{3}{4}$ | 85.7 | 45.32 | 24.153 | 27.466 | Coined by Tipú. |
| Harpanhálí, old. | 50.76 | W.3 $2\frac{1}{4}$ | 76.8 | 39.00 | 20.783 | 23.633 | Former Rájá. |
| „ new | 51.10 | W.3 0 | 79.2 | 40.45 | 21.558 | 24.520 | Current at Bellary |
| Ikkerí, old..... | 52.40 | W.2 $1\frac{3}{4}$ | 81.5 | 42.71 | 22.762 | 25.884 | Coins of Maisúr and |
| „ new..... | 52.50 | W.1 3 | 84.4 | 44.30 | 23.606 | 26.851 | Bednor mints so called |
| Jamsharí ..... | 52.00 | W.1 3 | 84.4 | 43.87 | 23.380 | 26.589 | Trichinopoly. |
| Madras..... | 45.83 | standard | 91.7 | 42.01 | 22.387 | 25.464 | Exchange at Ma- |
| „ double.. | 91.64 | standard | 91.7 | 84.00 | 44.764 | 50.927 | dras, $3\frac{1}{2}$ rupees. |
| „ star, average | 52.40 | W.2 2 | 81.2 | 42.55 | 22.780 | 25.907 | |
| Muhammadsháhí old..... | 50.53 | W.2 $3\frac{3}{4}$ | 79.4 | 40.14 | 21.388 | 24.327 | Coined by Mah. 'Alí Khán, Nawáb of Karnátic. |
| „ new | 45.30 | W.4 0 | 75.0 | 33.97 | 18.104 | 20.585 | |

[1] Srínagarpatam.

| Denomination. | Weight in grains. | Assay in car. grs. | Touch or pure gold in 100 parts. | Pure contents in grains. | Intrinsic value of 100. In Calcutta Gold Muhrs. | Intrinsic value of 100. In Madras or Bombay gold rupees | Remarks. |
|---|---|---|---|---|---|---|---|
| | | c. grs. | | | | | |
| Naidí | 52.82 | W .1 3 | 84.4 | 44.57 | 23.752 | 27.010 | [Khán Chitor. |
| Pedatolá | 52.50 | W. 1 2½ | 84 9 | 44.57 | 23.751 | 23.599 | By Fateh Ulla |
| Paliampatpagoda | 51.80 | W. 8 3 | 55.2 | 28.60 | 15.240 | 17.332 | Near Trichinopoly |
| Porto Novo | 52.21 | W. 7 3½ | 58.8 | 30.73 | 16.390 | 18.640 | A Portuguese coin |
| Pulkbunder | 51.50 | W. 1 2 | 85.4 | 43.99 | 23.442 | 26.655 | Same as Madras. |
| Sadaki, double | 105.75 | W. 1 2 | 85.4 | 90.33 | 48.136 | 54.748 | |
| Sáttárí | 50.00 | W. 3 3 | 76.0 | 38.02 | 20.262 | 23.042 | Coined at Sáttára. |
| Shír Khání | 49.50 | W. 1 3 | 84.4 | 41.77 | 22.257 | 25.316 | |
| Scott | 52.23 | W. 6 3 | 63.5 | 33.19 | 17.686 | 20.119 | Same as Porto Novo |
| Sravanur | 50.46 | W. 2 0¾ | 82.6 | 41.65 | 22.196 | 25.247 | |
| another | 51.50 | W. 4 0 | 75.0 | 38.62 | 20.583 | 23.406 | |
| Star (see Madras) | | | | | | | [Maliapur. |
| St. Thomé | 75.33 | B. 0 3¼ | 95.1 | 71.60 | 38.159 | 43.399 | Double pagoda of |
| Súbárí, ½ pagoda | 26.20 | W. 1 1¾ | 86.2 | 22.58 | 12.030 | 13.692 | |
| Sultání | 52.40 | W. 1 2¾ | 84.7 | 44.35 | 23.635 | 26.873 | Coined by Tipú. |
| Travancore | 51.00 | W. 2 1¼ | 81.8 | 41.70 | 22.224 | 25.270 | Anandrâí, still coined |
| Venkatapati | 51.47 | W. 3 3 | 76.0 | 39.14 | 20.856 | 23.724 | At Venkatagiri. |
| PANAM OR FANAM | | | | | | | [their purity. |
| Aparanj | 2.68 | W. 0 2 | 89.6 | 2.44 | 1.279 | 1.517 | So called from |
| Arialur | 5.34 | W.11 2 | 43.7 | 2.33 | 1.244 | 1.415 | Near Tanjore. |
| Chakrí | 5.31 | W.16 0 | 25 0 | 1.33 | 0.708 | 0.805 | Tripati coin. |
| Contarái | 5.85 | W. 8 0 | 58.3 | 3.41 | 1.819 | 2.068 | Ikkerí or Maisúr. |
| Gattí | 5.39 | W.11 1⅓ | 44.3 | 2.38 | 1.271 | 1.445 | Tripati—Chitavel. |
| Gulgí | 5.62 | W.10 1 | 48.9 | 2.15 | 1.465 | 1.666 | Marked with a rose |
| Gopálí, old | 5.15 | W.16 2 | 22.9 | 1.18 | 0.629 | 0.715 | At Madhyargun, |
| „ new | 5.15 | W.16 0 | 25.0 | 1.29 | 0.686 | 0.783 | near Kudalur. |
| Kálíam, or Kálí | 5.44 | W.13 2 | 35.4 | 1.92 | 1.026 | 1.166 | Anandrâí fanam. |
| Panchkol | 5.61 | W.10 2¾ | 46.6 | 2.65 | 1.410 | 1.603 | Coimbatore. |
| Salem | 4.69 | W.15 1¼ | 27.9 | 1.31 | 0.696 | 0.792 | Coined at Salem. |
| Sulí | 5.15 | W.16 0 | 25.0 | 1.29 | 0.686 | 0.780 | Tinivelly. |
| Tanjore | 5.46 | W.15 0 | 29.1 | 1.59 | 0.848 | 0.964 | |
| Viraráya | 5.85 | W.10 3¼ | 46.6 | 2.72 | 1.452 | 1.651 | Malabar. |
| Wodiar | 5.44 | W.11 2 | 43.7 | 2.38 | 1.267 | 1.441 | Ditto. |
| FOREIGN GOLD COINS. | | | | | | | Net produce of 100 at Calcutta in sikka rupees; at 17 Rs. per gold muhr (deducting coinage duty. |
| Doubloon Spanish | 416.50 | W. 0 2 | 89.6 | 373.11 | 198.834 | 226.125 | 3312.575 |
| „ 1786 to 1826 | 417.00 | W. 1 0⅓ | 87.0 | 362.70 | 193.286 | 219.825 | 3220.145 |
| „ Chili, 1823 | 417.00 | W. 1 0¼ | 87.3 | 363.79 | 193.865 | 220.473 | 3229.791 |
| „ Columbia 1826 | 417.00 | W. 1 3 | 84.4 | 351.4 | 187.552 | 213.296 | 3124.646 |
| „ Peru | 417.00 | W. 1 0½ | 87.0 | 362.0 | 193.286 | 219.825 | 3220.145 |
| Ducat, Dutch | 53.50 | B. 1 2¼ | 98.2 | 52.3 | 27.996 | 31.844 | 466 413 |
| Guinea, English | 129.50 | standard | 91.7 | 118.70 | 63.258 | 71.945 | 1053.879 |
| Sovereign, ditto | 123.25 | standard | 91.7 | 113.10 | 60.271 | 68.544 | 1004.115 |
| 20 franc, French | 99.57 | W. 0 1⅔ | 90.0 | 89.62 | 47.757 | 54.313 | 795.632 |
| Johannese, Portg. | 222.50 | W. 0 0¼ | 91.4 | 203.38 | 108.381 | 123.258 | 1805.628 |
| Moidore, ditto | 124.00 | standard | 91.7 | 113.67 | 60.573 | 68.885 | 1009.146 |
| Sequin, Venetian | 52.40 | B. 1 3¾ | 99.7 | 52.27 | 27.853 | 31.673 | 464.031 |
| Tomán, Persian | 73.00 | B. 1 0¼ | 96.1 | 70.15 | 37.382 | 42.511 | 622.785 |
| Copang, Japanold | 273.00 | W. 1 2 | 85.5 | 233.20 | 124.806 | 135.272 | 2079.268 |
| „ new | 201.75 | W. 6 0 | 66.7 | 134.50 | 71.676 | 81.555 | 1194.123 |

(To convert the decimals into ánás and pá'ís, see Table, page 12; for explanation of the present table, see page 36.)

## SUPPLEMENTARY TABLE OF GOLD COINS.

Since the Table of Gold Coins, page 43, went to press,[1] an opportunity has been afforded of adding largely to its contents, from the examination of a remittance of 725 old gold muhrs sent from the general treasury to be melted and re-coined. On a laborious scrutiny of them, many pieces of all the emperors of Dihlí, since the time of Akbar, were discovered; and a few anterior to that monarch: besides a large store of Bhopál, Jaipúr, and Kotá or Búndí, muhrs, easily recognised by their respective symbols. The whole were weighed and assayed, and the results are given in the present supplement, arranged in two classes, the first, in the order of the emperors; and the second, alphabetically, in that of the localities. As there was considerable difficulty in recognizing many of them, in which part of the name was wanting, it may be convenient here to accompany the table with a catalogue of the inscriptions most commonly met with on the gold coins of each monarch, from Akbar downwards. Some of them, as will be seen, have two or three different forms, which is very perplexing to the examiner. The term Sáhib-kirán[2] (lord of the *kirán*, or 'fortunate conjunction of the planets') was first applied to Taimúr; afterwards to Sháh Jahán, as Sáhib-kirán Sání (the Second); and lastly to Muhammad Sháh.

It is worthy of remark, that most of the gold muhrs in the present table agree very nearly together in weight and value: and the average value of 100 may be taken as equal precisely to 100 Bombay and Madras new gold muhrs (or gold rupees as they are anomalously styled). The Calcutta gold muhr has no equivalent in the list: it would therefore be no innovation, but rather a restoration of the former system, which prevailed for three hundred years unremittedly, to abolish the Calcutta gold muhr of 204.71 grains, and adopt in its place the 180-grain muhr of Southern and Western India for the standard of the Bengal Presidency. Thus, were the sikká rupee abolished, there would remain but one gold and one silver coin throughout British India, both containing the same weight of precious metal, so that the relative value of gold and silver would be at once known; the present nominal rate of sixteen rupees[3] might still continue the legal equivalent of the muhr, since the value of gold is permanently risen nearly to that extent.

[1] [I have allowed this to stand as it appeared in the original, as it did not seem that any material object would be gained by an incorporation of the two Tables.]

[2] صاحب قران

[3] [The old muhr sells at 17.8, its legal rate being 16 rupees. The influx of Australian gold has of late considerably reduced the relative value of that metal in the bázárs of India.]

INSCRIPTIONS ON MUHRS OF THE MOGHUL EMPERORS.

AKBAR.

Obverse:

جلال الدين محمد اكبر بادشاه غازي

'The glory of the faith, Muhammad Akbar, the victorious emperor.'[1]

Reverse: The Kalimah.

This inscription, though apparently so common, is not mentioned in Abú'l Fazl's list of the royal coins; the specimens vary in date from 972 to 985 A.H.

JAHÁNGÍR.

جهانگير شاه ابن اكبر بادشاه ضرب برهانپور امان الله

'Jahángír Sháh, son of Akbar Bádsháh. Struck at Burhánpúr, May God preserve him.'

SHÁH JAHÁN.

(*a*) A plain disc—

Obverse: the Kalimah,

لا اله الا الله محمد الرسول الله ضرب برهانپور سنه الهي ٨٢

'There is no God but God, etc. Struck at Burhánpúr in Ilahí year 82.'

Reverse:

شهاب الدين محمد شاهجهان غازي صاحبقران ثاني

'The bright star of the faith, Muhammad Sháh Jahán, Ghází Sáhib-kirán the second.'

(*b*) The chaháryárí muhr—

Obverse: A square centre, containing the Kalimah; around which are the names of the four companions of the prophet, Abubakr, 'Omar, 'Osmán, and 'Alí.

لا اله الا الله محمد الرسول الله ابوبكر عمر عثمان علي

Reverse: Same as before: 'San jalús v.'

(*c*)

Obverse: A lozenge shield, containing the Kalimah, around which, 'Zarb Allahábád, san 1031.'

Reverse: As in the other specimens.

AURANGZÍB.

Obverse:

در جهان سكه زد چون مهر منير شاه اورنگ‌زيب عالمگير

'Sháh Aurangzíb 'Álamgír issued coin, brilliant as the sun.'

[1] [غازي is more properly 'a warrior of the faith,' and in this sense we must understand its application on these coins.]

Reverse :

ضرب مستقر الخلافة اکبرابادسنه جلوس میمنت مانوس

'Minted at the seat of the Khiláfat, Akbarábád, the year of the reign of fortunate associations.'

BAHÁDUR SHÁH.

Obverse :

سکهٔ مبارک شاه عالم بهادر بادشاه غازي سنه ۱۱۲۳

'Auspicious coin of Sháh 'Alam Bahádur, Bádsháh Ghází. A.H. 1123.'

Reverse :

ضرب خجسته بنیاد سنه جلوس ٥

'Struck in the favored city, year of the reign 5.'

JAHÁNDÁR SHÁH.

Obverse :

سکه زد بر سیم و زر چون مهر و ماه
ابوالفتح جهاندار شاهغازي بادشاه ۱۱۲۴

'The father of victory, the Emperor, Jahándár Sháh Ghází, struck coin in silver and gold, resembling the sun and moon. A.H. 1124.'

Reverse : As in Aurangzíb's coins.

FARRUKHSIR.

Obverse :

سکه زد از فضل حق بر سیم و زر فرخسیر بادشاه بهر و بر

'By the grace of God, the monarch of sea and land, Farrukhsír, struck silver and gold coin.'

Reverse :

سنه ٦ جلوس میمنت مانوس ضرب دارالخلافة شاهجهانآباد

'The sixth year of his prosperous reign. Minted at the seat of the Khaláfat, Sháh Jahánábád (Dihlí).

MUHAMMAD SHÁH.

(*a*)

Obverse :

سکهٔ مبارک محمد شاه بهادر بادشاه غازي سنه ۱۷[1]

'Auspicious coin of Muhammad Sháh, the victorious emperor, 17th year.'

Reverse : As usual ; sans 2 to 17.

(*b*)

The same inscription with the addition of صاحب قران ثاني chiefly of the year 12 ; a debased coin.

[1] [ This legend is ordinarily peculiar to Ahmad Sháh.]

(*c*)
Obverse:

سکه زد بر سیم و زر چون مهر و ماه
ابوالفتح غازي الدين محمدشاه

'The father of victory, defender of the Faith, Muhammad Shâh, struck silver and gold coin resembling the sun and moon.'

Reverse: As in (*a*); and of various years.

AHMAD SHÁH.

Obverse: Same as the coin of Farrukhsír, with exception of name:

سکه زد بر سیم و زر از فضل حق احمد شاه سنه ۱۱۴ [1]

Reverse: As usual.

'ÁLAMGÍR II.

There are also three varieties of inscriptions on his coins (the reverse of all being as usual).

(*a*)
Obverse:

سکهٔ مبارک بادشاه غازي عالمگير ثاني

'Fortunate coin of Bádsháh Ghází 'Álamgír the second.'

(*b*)
Obverse:

ابوالعدل عزيز الدين شاه عالمگير بادشاه غازي خلد الله ملكه
سنه ۳

'The father of justice, chosen of the faith, Shâh 'Álamgír II. Bádsháh Ghází. (May God perpetuate his kingdom!)' Sans 2 and 3.

(*c*)
Obverse:

سکه زد بر هفت کشور تابان همچون مهر و ماه
عزيز الدين عالمگير ثاني بادشاه

'Chosen of the faith, 'Álamgír the second, struck coin in the seven climes, shining like the sun and moon.' A.H. 1170 to 1173. Sans 3 and 6.

SHÁH 'ÁLAM.

Obverse:

سکه زد بر هفت کشور سايه فضل الله

Reverse:

حامي دين محمد شاه عالم بادشاه

The same as on the Company's coin, explained at page 2. All later than the 19th san, bear the symbol of a royal umbrella.

[1] [ I distrust this reading; but not having the original coin to refer to, I do not venture to amend the attribution.—E. T.]

[I cannot well afford the space requisite to complete the list of the coinage of the Moghul Emperors of Hindústán; but I venture to insert the legend of perhaps the most interesting coin in the whole series; together with two novelties, hitherto, I believe, unpublished.

I. Silver coin of Núr Jahán Bígam. Struck by order of Jahángír, A.H. 1034.[1]

Obverse:

زنام نور جهان بادشاه بيگم زر سنه جلوس ۲۰

Reverse:

بحكم جهانگير شاه يافت صد زيور ضرب لاهور ۱۰۳۴

A second coin in the British Museum of the same date is seen to have been minted at Ahmadábád.

II. Silver. Murád Bakhsh. Three coins in the British Museum. No date.

Obverse: Square area—The Kalimah.

Margin—The names of the Four Companions of the Prophet.

Reverse: Square area,

محمد مراد بخش بادشاه غازي

Margin:

ابو المظفر تاج الدين ضرب سورت

III. Silver. Rafíʿud-darját. Five coins in the British Museum. A.H. 1131.

Obverse:

سكه زد باهزاران بركات شاهينشه بحر و بر رفيع الدرجات ۱۱۳۱

Reverse:

ضرب سنه احد جلوس ميمنت مانوس

Other specimens bear the names of Láhor with مستقر الخلافة; and Dihlí under the style of دار الخلافة شاهجهانابان.—E.T.]

[1] [Marsden, p. 635; Anquetil du Perron, p. 221;—Láhor, A.H. 1035.]

## *Supplementary Table of Indian Gold Coins.*

(The letters (*a*) (*b*) and (*c*) refer to the inscriptions in pages 46 to 48.)

| Denomination. | Weight in grains. | Assay in car. grs. | Touch or pure gold in 100 parts. | Pure contents in grains. | Intrinsic value of 100. | | Remarks. |
|---|---|---|---|---|---|---|---|
| | | | | | In Cal. gold muhrs. | In Mad. or Bom. gold rs. | |
| Jalál-ud-dín ..... | 163.80 | B. 0 $2\frac{3}{4}$ | 94.5 | 154.84 | 82.516 | 93.843 | A. D. 1288 ? |
| 'Alá-ud-dín ..... | 166.50 | B. 0 $2\frac{1}{2}$ | 94.2 | 156.96 | 83.645 | 95.128 | Abú'l Muzaffiar. |
| Taimúr Sháh..... | 167.40 | B. 0 $3\frac{1}{4}$ | 95.1 | 159.12 | 84.795 | 96.435 | A. D. 1396, Dihlí. |
| Akbar, average ... | 162.44 | B. 2 0 | 100.0 | 162.44 | 86.565 | 98.448 | A. D. 1556, Dihlí. |
| single..... | 165.60 | B. 1 $1\frac{1}{2}$ | 97.4 | 161.29 | 85.951 | 97.750 | Injured by solder of ring. |
| Jahángír ..... | 166.90 | B. 2 0 | 100.0 | 166.90 | 88.942 | 101.152 | At Barhánpúr. |
| Sháh Jahán (*a*)... | 168.65 | B. 1 $1\frac{1}{2}$ | 97.4 | 164.26 | 87.534 | 99.550 | Plain field. |
| (*b*) chahár-yárí.. | 168.20 | B. 1 $3\frac{3}{4}$ | 99.8 | 167.76 | 89.402 | 101.674 | Square shield. |
| ,, ..... | 168.40 | standard. | 91.7 | 154.37 | 82.263 | 93.551 | Vitiated by solder? |
| (*c*) lozenge shield | 165.58 | B. 1 $3\frac{1}{2}$ | 99.5 | 165.15 | 88.008 | 100.090 | Struck at Allahábád. |
| Patna..... | 170.70 | B. 1 $3\frac{3}{4}$ | 99.7 | 169.37 | 90.256 | 102.647 | Supposed from symbol 39. |
| doubtful * | 164.70 | W. 2 2 | 81.3 | 133.82 | 71.313 | 81.102 | Probably forged. |
| Aurangzíb, plain.. | 168.68 | B. 2 0 | 100.0 | 168.68 | 89.890 | 102.230 | Several. |
| sans 5 to 51 .. | 168.29 | B. 1 2 | 98.0 | 164.78 | 87.812 | 99.867 | Dihlí, A.H. 1076. |
| * Agra ..... | 162.00 | B. 2 0 | 100.0 | 162.00 | 86.330 | 98.182 | 1100, these vary |
| Etáwa ..... | 168.20 | B. 2 0 | 100.0 | 168.20 | 89.634 | 101.939 | only in the place |
| Dihlí ..... | 167.65 | B. 2 0 | 100.0 | 167.65 | 89.371 | 101.606 | of coinage. |
| Láhor ..... | 167.60 | B. 0 $2\frac{3}{4}$ | 94.5 | 158.43 | 84.430 | 96.021 | |
| Súrat ..... | 170.20 | B. 2 0 | 100.0 | 170.20 | 90.700 | 103.152 | |
| san 29 * ..... | 164.00 | W. 2 $3\frac{1}{2}$ | 79.7 | 130.69 | 69.644 | 79.204 | No place of coinage, others Dihlí. |
| * Aurangábád.. | 164.67 | B. 2 0 | ... | 164.67 | 87.756 | 99.803 | A.H. 1097, Láhor? |
| * Khujistah buníád..... | 165.60 | B. 1 0 | ... | 158.70 | 84.572 | 96.182 | |
| Multán ..... | 168.55 | B. 1 $3\frac{1}{4}$ | ... | 167.23 | 89.119 | 101.353 | |
| Bahádur Sháh ... | 168.35 | B. 1 $1\frac{1}{2}$ | 97.4 | 163.53 | 87.145 | 99.108 | Sháh 'Alam I.; struck at 'Khujistah buníád,' (Dihlí), in 1123. |
| Jahándár Sháh ... | 167.25 | B. 2 0 | 100.0 | 167.25 | 89.128 | 101.364 | Struck at Jonpúr, 1124. |
| Farrukhsír, san 6. | 167.33 | B. 1 $0\frac{1}{2}$ | 96.4 | 161.23 | 85.922 | 97.717 | Dihlí, A.H. 1125. |
| Láhor ..... | 168.00 | B. 1 $0\frac{1}{2}$ | 96.4 | 161.87 | 86.263 | 98.106 | |
| Muham. Sháh (*a*) | 167.12 | B. 1 1 | 96.9 | 161.90 | 86.278 | 98.122 | Struck at Dihlí. |
| (*b*) sans 2 to 17 ... | 168.07 | B. 1 1 | 97.4 | 163.69 | 87.235 | 99.200 | (Average.) |
| Agra ..... | 164.79 | B. 1 3 | 99.0 | 163.07 | 86.900 | 98.830 | |
| Allahábád ... | 166.70 | B. 1 $3\frac{1}{4}$ | 99.2 | 165.40 | 88.141 | 100.241 | |
| (*c*) Arkát ..... | 166.30 | B. 1 $0\frac{1}{2}$ | 96.4 | 160.24 | 85.391 | 97.113 | San 1. |
| Benáres ..... | 167.30 | B. 2 0 | 100.0 | 167.30 | 89.155 | 101.394 | San 20. See p. 21. |
| Islámábád ... | 168.30 | B. 1 $3\frac{1}{4}$ | 99.2 | 166.98 | 88.987 | 101.203 | ? Dacca or Dihlí. |
| Ujjain ..... | 166.90 | B. 1 $2\frac{3}{4}$ | 98.5 | 164.29 | 87.551 | 99.571 | |
| Etáwa ..... | 167.90 | B. 1 $3\frac{3}{4}$ | 99.8 | 167.46 | 89.241 | 101.493 | |
| (*c*) san 12 ..... | 164.70 | W. 1 0 | 87.5 | 144.12 | 76.800 | 87.344 | Ill-executed, Dihlí[1] marked ष्ण. |

The coins marked thus * appear to be forgeries; there are twenty-seven of them bearing the superscription of Aurangzíb, badly executed, and nine having that of Farrukhsír, and the date A.H. 1126, with the same san, jalús 29, although the latter emperor only reigned six years.

[1] This debased muhr is very peculiar:—it was probably coined under Maráthí influence—there were eighty-three of the sort, all of the same date.

| Denomination. | Weight in grains. | Assay in car. grs. | Touch or pure gold in '00 parts. | Pure contents in grains. | Intrinsic value of 100. | | Remarks. |
|---|---|---|---|---|---|---|---|
| | | | | | In Cal. gold muhrs. | In Mad. or Bom. gold rs. | |
| Ahmad Sháh ..... | 167.65 | B. 1 3 | 99.0 | 165.90 | 88.410 | 100.547 | |
| Barhánpúr ... | 169.80 | B. 2 0 | 100.0 | 169.80 | 90.487 | 102.909 | |
| 'Álamgír II. san 1 | 167.30 | B. 1 3¼ | 99.2 | 165.99 | 88.458 | 100.602 | Struck at Dihlí (*a*). |
| san 3 ..... | 167.78 | B. 1 3 | 99.0 | 166.03 | 88.478 | 100.624 | Inscription (*b*). |
| A. H. 1170-1173..... | 167.50 | B. 1 2⅓ | 98.4 | 164.88 | 87.867 | 99.929 | Inscription (*c*). |
| var. sans ..... | 168.00 | B. 1 3 | 99.0 | 166.25 | 88.595 | 100.757 | Struck at Siwái. |
| Sháh 'Álam, Dihlí | 167.41 | B. 1 1½ | 97.4 | 163,05 | 86.890 | 98.818 | Present inscription. See page 2. |
| sans 3 to 15⅓ | | | | | | | |
| sans 19 to 34 | 166.31 | B. 2 0 | 100.0 | 162.85 | 86.783 | 98.696 | With the chhata. |
| Barhánpúr ... | 169.50 | B. 1 3½ | 99.5 | 168.62 | 89.857 | 102.192 | Same as old Bom. |
| Farrukhábád. | 165.75 | standard. | 91.7 | 151.94 | 80.968 | 92.084 | ? Average of 16. |
| Lukhnow..... | 166.80 | B. 1 3¼ | 99.2 | 164.07 | 87.435 | 99.438 | Under the Nawáb. |
| Súrat, san 19. | 170.15 | B. 1 3¾ | 99.8 | 169.71 | 90.438 | 102.853 | Same as old Bom. |
| Akbar II. ..... | 166.60 | B. 2 0 | 100.0 | 166.60 | 88.782 | 100.970 | With dagger. |
| *Local Gold Coins.* | | | | | | | |
| Agra ..... | 164.79 | B. 1 3 | 99.0 | 163.07 | 86.900 | 98.830 | Muhammadsháhí. |
| Allahábád[1] ..... | 162.00 | W. 10 0 | 50.0 | 81.00 | 43.165 | 49.091 | Debased ? false. |
| Arkát, M.S. san 1. | 166.30 | B. 1 0½ | 96.4 | 160.24 | 85.391 | 97.113 | Muhammadsháhí. |
| Benáres, san 20... | 167.30 | B. 2 0 | 100.0 | 167.30 | 89.155 | 101.394 | ,, |
| Bhopál, san 27 ... | 167.50 | B. 1 0⅓ | 96.4 | 164.01 | 87.402 | 99.400 | Average of 149. |
| Barhánpúr..... | 169.50 | B. 1 3½ | 99.5 | 168.62 | 89.857 | 102.192 | Same as old Bom. |
| Etáwa..... | 167.90 | B. 1 3¾ | 99.8 | 167.46 | 89 241 | 101.493 | Muhammad Sháh and Farrukhsír. |
| Farrukhábád..... | 165.75 | standard. | 91.7 | 151.94 | 80.968 | 92.084 | Company's new standard. ? |
| Islámábád, Dacca? | 168.30 | B. 1 3¼ | 99.2 | 166.98 | 88.987 | 101.203 | Muhammadsháhí. |
| Jaipúr, san 8..... | 166.60 | W. 2 0 | 100.0 | 138.83 | 73.985 | 84.141 | ? False money. |
| san 22 ..... | 168.11 | B. 2 0 | 100.0 | 168.11 | 89.589 | 101.888 | These are averages |
| san 23 ..... | 167.94 | B. 2 0 | 100.0 | 167.94 | 89.498 | 101.784 | of many, all |
| san 24 ..... | 168.12 | B. 2 0 | 100.0 | 168.12 | 89.590 | 101.889 | new coins of the |
| var. sans ..... | 167.80 | B. 2 0 | 100.0 | 167.80 | 89.421 | 101.697 | Jaipúr mint. |
| Siwái, san 18. | 168.10 | B. 1 3¼ | 99.2 | 166.79 | 88.881 | 101.083 | Has the same symbol. |
| Kotá, sans 1 to 18. | 167.08 | B. 1 0 | 95.8 | 160.12 | 85.329 | 97.043 | Known by the |
| San 19..... | 166.72 | B. 1 2⅓ | 98.2 | 163.68 | 87.225 | 99.199 | Kotá and Búndí symbol. |
| Lukhnow, old ... | 165.80 | B. 1 3¼ | 99.2 | 164.07 | 87.435 | 99.438 | Machhlísáhí. |
| new..... | 165.65 | B. 1 2⅓ | 98.5 | 163.07 | 86.898 | 98.828 | Shírsáhí. |
| Ujjain, san 2 ..... | 166.90 | B. 1 2⅓ | 98.5 | 164.29 | 87.551 | 99.571 | Muhammadsháhí. |
| Patna, Sháhjahán | 170.70 | B. 1 3¼ | 99.2 | 169.37 | 90.256 | 102.647 | ? (From symbol 39, p. 67.) |
| Ságar? marked सा | 164.70 | B. 0 '0½ | 92.2 | 151.83 | 80.912 | 92.019 | This monogram is unknown. |
| Ságar, Srínagar?. | 166.25 | B. 1 2 | 98.0 | 162.79 | 86.750 | 98.659 | With the trisúl. |
| Súrat, san 19..... | 170.15 | B. 1 3¾ | 99.8 | 169.71 | 90.438 | 102.853 | Old Bombay. |
| Peshawar ..... | 164.00 | W. 8 1½ | 56.7 | 93.10 | 49.615 | 56.424 | Khurshíd Sháh. |

(For explanation of the several columns of this table see page 36; and for converting decimals into ánás and pá'ís, see the Table at page 12.)

[1] The inscription on this coin, of which there are three specimens, is very badly executed; the pieces are most probably forged.

## *Table of the Silver Coins of India.*

(To find the value in sikká rupees, deduct one-sixteenth from the value in Farrukhábád rupees: the latter are the same as Madras and Bombay rupees. For the value in £ sterling, divide by 10.)

| Name. | Weight. | Assay. | Touch. | Pure contents. | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | Dwts. | | Grains. | Fd. Rs. | |
| Agra rupee ..... | 171.62 | Br. 7 | 94.5 | 162.33 | 98.381 | Struck at Agra by? |
| Ahmadábád old ... | 178.00 | Wo. 4.5 | 89.8 | 159.83 | 96.864 | Gujarát and Cutch. |
| old ... | 179.92 | Wo. 17.5 | 84.4 | 151.81 | 92.004 | Formerly coined. |
| new ... | 180.75 | Wo. 15 | 85.4 | 154.39 | 93.568 | Present currency. |
| háli ... | 174.77 | Br. 12 | 96.7 | 168.94 | 102.390 | Coined for city currency. |
| Ahmad Sháh ..... | 177.25 | Br. 15 | 98.0 | 173.70 | 105.272 | (Equal to Dihlí standard, 1750.) |
| Ahmadnagar, old... | 174.50 | Br. 14.5 | 97.7 | 170.57 | 103.376 | Same as Dihlí rupee. |
| Ajmír, old ?..... | 168.60 | Wo. 11 | 87.1 | 146.82 | 88.982 | Srí sáhí, cmn. currency introduced by Tantia. |
| Srí sáhí ... | 168.17 | Wo. 27.5 | 80.2 | 134.89 | 81.751 | or Bápúsáhí? |
| 32nd san .. | 168.00 | Wo. 21 | 82.9 | 139.30 | 84.428 | Coined in 1792. |
| Allahábád ..... | 172.03 | Stand. | 91.7 | 157.70 | 95.573 | Sans 18, 21, and 26, (1778-86). |
| 'Alamgír II. 1759 . | 179.50 | Br. 16 | 98.5 | 176.51 | 106.974 | Equal to the Sá. rup. |
| Anásáhí ..... | 176.25 | Wo. 7.5 | 88.5 | 156.05 | 94.578 | Coined at Kaira, Gujarát. |
| „ ..... | 177.25 | Wo. 14.5 | 85.6 | 151.77 | 91.982 | Coined at Pitlad, do. |
| Ankusí, old ..... | 172.00 | Br. 3.5 | 93.1 | 160.17 | 97.075 | Standard of Puna, |
| new ..... | 173.50 | Br. 2.5 | 92.7 | 160.85 | 97.484 | also called Chinsurí. |
| Aracan, (Mug.) ... | 162.38 | Wo. 81.5 | 57.7 | 93.71 | 56.793 | |
| Arkát, (Company's) | 176.40 | Br. 7.5 | 94.8 | 167.26 | 101.340 | Coined in Calcutta |
| 1759..... | 177.25 | Br. 10 | 95.8 | 169.86 | 102.948 | for the Dacca and |
| 1782..... | 174.00 | Br. 11 | 96.2 | 167.47 | 101.500 | Katak districts, |
| 1788..... | 177.25 | Br. 11 | 96.2 | 170.60 | 103.396 | also the old currency of Madras. |
| old ..... | 172.39 | Br. 4.5 | 93.5 | 161.25 | 97.729 | The Súrat Arcot, |
| 1766..... | 171.47 | Br. 3.5 | 93.1 | 159.68 | 96.775 | mentioned in Reg. XXXV. 1793. |
| new ..... | 188.00 | Wo. 4.0 | 93.3 | 169.20 | 102.545 | The Madras dol. ru. |
| Katak ..... | 173.89 | Br. 9.0 | 95.4 | 165.92 | 100.556 | Formerly cur. here. |
| French ..... | 173.13 | Br. 9.5 | 95.6 | 165.55 | 100.334 | Coined at Pondicherry. |
| Garnálí ..... | 172.20 | Br. 7 | 94.6 | 162.88 | 98.716 | Uncertain (from Chitagong). |
| Phurshí..... | 172.78 | Br. 7.5 | 94.8 | 163.78 | 99.258 | 'Forshi' of Reg. XXXV. 1793. |
| uncertain ..... | 169.33 | Wo. 17.5 | 80.2 | 142.88 | 86.592 | Probably forged. |
| Jahází ..... | 173.573 | Br. 7.5 | 94.8 | 164.53 | 99.716 | Brought to Chitagong by sea. |
| Assam, mixed ..... | 174.05 | Br. 8 | 95.0 | 165.35 | 100.215 | Current in the valley |
| Rudra Singh... | 173.20 | Br. 15 | 98.0 | 169.59 | 102.782 | of Assam and the |
| Siva ..... | 173.40 | Br. 13 | 97.1 | 168.34 | 102.025 | neighbouring dis- |
| Pramatta ..... | 169.90 | Br. 12 | 96.7 | 164.24 | 99.537 | tricts; coined at |
| Rájendra ..... | 173.90 | Br. 12.5 | 96.9 | 168.47 | 102.100 | Rangpúr and Jor- |
| Lakhsmí ..... | 173.50 | Br. 13 | 97.1 | 168.44 | 102.084 | hat. |
| Gaurínáth ..... | 174.20 | Br. 10 | 95.8 | 166.94 | 101.177 | Restored to throne |
| „ ..... | 174.00 | Br. 6 | 94.1 | 163.83 | 99.303 | in 1793. |
| Bharat ..... | 174.75 | Br. 11.5 | 96.5 | 168.56 | 102.159 | |
| Ashásáhí ..... | 176.50 | Wo. 11 | 87.1 | 153.70 | 93.153 | Anásáhí? Gujarát, Baroda, Kaira, etc. |

| Name. | Weight. | Assay. | Touch. | Pure contents. | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | Dwts. | | Grains. | Fd. Rs. | |
| Aurangábád | 170.86 | Wo. 23.5 | 81.9 | 139.89 | 84.787 | Coined by Govind Bakhshí, (Haidarábád), see Govind Bakhshí. |
| Bábásáhí | 177.00 | Wo. 14.5 | 85.6 | 151.56 | 91.849 | Coined at Baroda, from san 4 to 18. |
| Bagalkotá | 172.30 | Wo. 5 | 89.6 | 154.35 | 93.546 | Mulharsáhí (Holkar). |
| Bálásáhí | 169.21 | Wo. 8.5 | 88.1 | 149.12 | 90.426 | Old coinage of Ságar, current in Gurrah and Bundelkhand. |
| | 162.14 | Wo. 5.5 | 89.4 | 144.92 | 87.828 | |
| | 169.00 | Wo. 6 | 89.2 | 150.69 | 91.328 | |
| Barellí | 171.90 | Br. 4.5 | 93.5 | 160.80 | 97.453 | Cur. in Rohilkhand. |
| | 169.28 | Br. 5.0 | 93.7 | 158.61 | 95.945 | Average of 4 lákhs. |
| Baroach, old | 177.06 | Br. 7.5 | 94.7 | 167.84 | 101.720 | Now disappearing. |
| new | 177.50 | Wo. 8.5 | 88.1 | 156.42 | 94.801 | Present currency (1821). |
| Baroda | | | | | | See Bábásáhí. |
| Batavia, 1763 | 199.00 | Wo. 20.5 | 83.1 | 165.41 | 100.254 | Coined by the Dutch East India Comp |
| 1803 | 204.00 | Wo. 30.5 | 79.0 | 161.07 | 97.621 | |
| Bhatúr | 171.30 | Wo. 10.0 | 87.5 | 149.89 | 90.841 | Near Ahmadnagar. |
| Bílápúr | 171.82 | Wo. 14.5 | 85.6 | 147.12 | 89.165 | Current at Púna, in Concan, etc. |
| Benáres, old | 175.00 | Br. 12 | 96.7 | 169.17 | 102.525 | Under native dar[illegible] |
| old stand | 175.00 | Br. 11.6 | 96.5 | 168.875 | 102.348 | By Reg. II. 1812, oblique milling. |
| since 1800 | 174.76 | Br. 9.5 | 95.6 | 167.00 | 101.285 | Average of rupees brought for recoinage. |
| 1819-1829 | 180.234 | standard | 91.7 | 165.21 | 100.134 | The late Farrukhábád rupee: mint abolished in 1830. |
| Bhikanír | 174.00 | Br. 11 | 96.2 | 167.47 | 101.500 | |
| Bhilára | 168.90 | Wo. 21.5 | 82.7 | 139.69 | 84.663 | Current in Ajmír. |
| Bhilsa, old | 169.62 | Wo. 12.5 | 86.5 | 146.65 | 88.882 | Mint under Bhopál Nawáb. |
| another | 169.01 | Wo. 16.5 | 84.8 | 143.31 | 86.901 | |
| new | 173.61 | Br. 6.5 | 94.4 | 163.47 | 99.299 | Reformed in 1827. |
| Bhopál | 171.38 | Wo. 6 | 89.2 | 152.82 | 92.616 | Coined at Bhopál. |
| another | 169.25 | Wo. 6.5 | 89.0 | 150.56 | 91.249 | (Reformed in 1827, see 'Bhilsa.') |
| Bhartpúr | 171.86 | Br. 10 | 95.8 | 164.70 | 99.819 | Average of many lákhs. |
| Bindrában | 156.67 | Wo. 19.5 | 83.5 | 130.89 | 79.325 | |
| Bombay, old | 178.33 | Br. 12 | 96.7 | 172.39 | 104.282 | Old Súrat rupee. |
| | 178.75 | Wo. 2.5 | 90.7 | 161.99 | 98.176 | Ditto debased. |
| 1800 | 179.00 | Br. 0.5 | 92.0 | 164.68 | 99.200 | Coined at Bombay and at Calcutta. |
| 1829 | 180.00 | standard | 91.7 | 165.00 | 100.000 | Present standard. |
| Búndí, 1819 | 171.56 | Wo. 7 | 88.8 | 152.26 | 92.273 | Current in Ajmír and Bundelkhand. |
| 1825 | 172.82 | Br. 7 | 94.6 | 163.46 | 98.622 | |
| Brazil, Pataka | 407.99 | Wo. 5 | 89.6 | 365.49 | 221.514 | Brazilian dollar. |
| Brodera, old | 178.50 | Wo. 1.5 | 91.1 | 162.51 | 98.490 | |
| new | 178.50 | Wo. 7 | 88.8 | 158.42 | 96.011 | |
| Balabsáhí | 175.56 | Wo. 15 | 85.4 | 149.957 | 90.880 | Coined at Baroda. |
| Bunder, tuksál | 163.79 | Br. 85 | 95.2 | 155.93 | 94.502 | |
| Garnálí | 174.66 | Br. 9 | 95.4 | 166.66 | 101.005 | |
| Barhánpúr | 178.80 | Br. 8.5 | 95.2 | 170.23 | 103.171 | Also called 'Parkí,' coined by Sindia in Khándesh. |
| Basra | 280.00 | Wo. 11.7 | 42.9 | 120.17 | 72.828 | Persian Gulf. |
| Calcutta, old | 179.666 | Br. 15 | 98.0 | 175.923 | 106.620 | The old Murshidábád 19th san sikká rupee. |

| Name. | Weight. | Assay. | Touch. | Pure Contents. | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | dwts. | | Grains. | Fd. Rs. | |
| Calcutta, new ..... | 191.916 | Stand. | 91.7 | 175.923 | 106.620 | By Reg. XIV. 1818.[1] |
| present .. | 192.00 | Stand. | 91.7 | 176.00 | 106.666 | By Reg. VII. 1833, all receivable at par. |
| Cambay ..... | 178.00 | Wo. 15 | 85 4 | 152.04 | 92.167 | Current in Nawáb's district. |
| Calání ..... | 172.66 | Wo. 24 | 81.7 | 141.01 | 85.460 | |
| Ceylon ..... | 134.00 | Wo. 24 | 81.7 | 109.43 | 66.323 | The rix-dollar of 1*s.* 9*d.* ? |
| | 138.32 | Wo. 5 | 89.6 | 123.91 | 75.074 | |
| Chambagondí ..... | 171.00 | Wo. 15 | 85 4 | 146.06 | 87.917 | Discount of 2 per cent. with Ankusí rupee. |
| Chanda ..... | 166.42 | Wo. 13 | 86.3 | 143.54 | 86.991 | Current in Nágpúr |
| 1819-24 ... | 169.70 | Wo. 4 | 90.0 | 152.78 | 92.563 | and the Narbaddá |
| 1825..... | 165.15 | Wo. 16.5 | 84.8 | 152.72 | 92.559 | |
| Chandérí ..... | 173.00 | Br. 1.5 | 92.3 | 159.66 | 96.766 | One of Sindia's mints |
| Chandolí ..... | 170.15 | Wo. 14.5 | 85.6 | 145.69 | 88.299 | Gwáliár rupee. |
| Chandúrí ..... | 172.00 | Br. 1 | 92.1 | 158.38 | 95.989 | Khándesh standard, |
| another .. | 168.70 | Wo. 2.5 | 90.7 | 152.88 | 92.656 | current in N. Concan, at par with |
| another .. | 169.70 | Wo. 1 | 91.3 | 154.85 | 93.849 | Ankusí rupee. |
| Chandrapúr ..... | 163.00 | Wo. 19 | 83.8 | 136.51 | 82.735 | Average. |
| | 166.50 | Wo. 5 | 89.6 | 149.16 | 90.397 | |
| Chinsurí ..... | 172.50 | Br. 3 | 92.9 | 160.28 | 97.140 | Same as Ankusí of Puna. |
| Chitor ..... | 169.57 | Wo. 28.5 | 79.8 | 135.31 | 82 004 | Current in Ajmír. |
| Chaurási ..... | 171.75 | Wo. 3.5 | 90.3 | 154.94 | 93.901 | Ikkerí. |
| Chaundá ..... | 164.85 | Wo. 13 | 86.3 | 142.18 | 86.171 | Same as Chanda ? |
| Chandausí, san 29. | 171.10 | Wo. 9.5 | 95.6 | 160.57 | 95.497 | Coined by Zábita-khán in Rohilkhand. |
| Chalaní ..... | 160,71 | Wo. 27 | 80.4 | 129.23 | 78.324 | Haidarábád. |
| Sulukí..... | 169.47 | Wo. 28.5 | 79 8 | 135.22 | 81.954 | |
| Chappá ..... | 172.50 | Br. 6 | 94.1 | 162.44 | 98.447 | |
| Katak ..... | 172.18 | Br. 6.5 | 94.3 | 162.33 | 98.380 | Arkát rupee coined at Calcutta. |
| Cálpí ..... | 169.07 | Wo. 11.5 | 86.9 | 146:88 | 89.021 | Bundelkhand. |
| Chatrapúr ..... | 169.00 | Wo. 8.5 | 88.1 | 148.93 | 90.261 | Rájá Pratáp Singh, Bundelkhand. |
| Dacca ..... | 179.30 | Br. 12 | 96,7 | 173.32 | 105.044 | Same as the sikká rupee. |
| Deíg..... | 169.70 | Wo. 7.5 | 88.5 | 150.25 | 91.064 | Near Bhartpúr. |
| Dihlí ..... | 172.40 | Br. 13 | 97.1 | 167.37 | 101.437 | See Sonát, and the |
| Muhammad Sháh.. | 173.30 | Br. 12.5 | 96.9 | 167.88 | 101,806 | various súbahs ? |
| 38th san | 172.80 | Br. 3 | 92.9 | 160.56 | 97.309 | |
| | 173.00 | Br. 6.5 | 94.4 | 163.27 | 98.951 | |
| Dollar,[2] Spanish ... | 417.60 | Wo. 4.6 | 89.7 | 374.87 | 227.194 | Since 1772, by law. |
| | 415.68 | Wo. 4.5 | 89.8 | 374.27 | 226.830 | Average in England. |
| | 415.00 | Wo. 5 | 89.6 | 372.21 | 225.584 | Since 1812, average of Calcutta assays. |
| N. American | 416,00 | Wo. 6 | 89.2 | 371.25 | 225,000 | By United States law. |
| Dutch guilder ..... | 161.00 | Wo. 1.5 | 91.1 | 144.53 | 87,603 | By law, 162 grs. |
| English shilling ... | 87,25 | Br. 2 | 92.5 | 80.70 | 48.909 | (Previous to 1830 |
| crown ..... | 436.36 | Br. 2 | 92.5 | 403.63 | 244.624 | nearly 3 dwts. Br.) |
| Etáwa ..... | 171.80 | Br. 1.5 | 92.3 | 158.56 | 96.095 | In the Doáb. |
| French 5-franc ... | 385.85 | Wo. 4 | 90.0 | 347.26 | 214.360 | By French law. |
| | 384.50 | Wo. 4.5 | 89.8 | 345.25 | 209.242 | By Calcutta assays. |

[1] The standard of 1818-1830 was really a pennyweight too fine, in consequence of an error in the old standard plate of England, to which the assays of India were referred. The proper correction has now been introduced in both countries: and it has been to the assays in this table made prior to 1830.

[2] The dollars of the independent states of Mexico, Bolivia, Chili, and Peru, are of the same weight and value as the Spanish dollar: they varied during the revolutionary period,

| Name. | Weight. | Assay. | Touch. | Pure contents. | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | dwts. | | Grains. | Fd. Rs. | |
| Fath 'Alí sháhí ... | 157.71 | Br. 7 | 94.5 | 149.17 | 90.406 | Late king of Persia, |
| another ... | 143.39 | Br. 9.5 | 95.6 | 137.12 | 83.100 | died in 1833. |
| A. H. 1244 | 105.50 | Br. 4.5 | 93.5 | 98.64 | 59.810 | Struck at Hamadán.[1] |
| 1245-48 ... | 105.12 | standard | 91.7 | 96.36 | 58.400 | Struck at Shíráz. |
| Farrukhábád 39 san | 169.40 | Br. 6 | 94.1 | 153.23 | 97.073 | Old native currency, average. |
| Company's ..... | 173.00 | Br. 9.2 | 95.5 | 165.215 | 100.144 | 45th san Lukhnow Rs. of Reg. XLV. 1803 |
| new standard ... | 180.234 | standard | 91.7 | 165.215 | 100.144 | By Reg. XI. 1819. |
| present ..... | 180.00 | standard | 91.7 | 165.00 | 100.000 | By Reg. VII. 1833. |
| Generally ..... | 167.20 | Wo. 8 | 88.3 | 147.69 | 89.511 | Gárnálí Arkát. |
| German crown ..... | 433.00 | Wo. 20 | 83.3 | 360.84 | 218.691 | Legal value by convention of 1763. |
| | 430.45 | Wo. 20.5 | 83.1 | 357.81 | 216.855 | By Calcutta assays. |
| Ghatsan rupee ..... | 173.31 | Br. 9 | 95.4 | 165.37 | 100.222 | 29th san Reg. III. 1806 |
| *Goa* ..... | 168.50 | Wo. 12 | 86.4 | 145.58 | 88.230 | Imported at Bombay as bullion. |
| Gohursáhí ..... 1 to 15 san ... chaurá ..... | 174.43 | Br. 11.5 | 96.5 | 168.25 | 101.971 | Sháh 'Alam? Benáres mint; *chaurá*, broad |
| thumká ..... | 174.18 | Br. 7 | 94 5 | 164.74 | 99.833 | *Thumká*, stumpy or broad; all current |
| 16th san ..... | 174.52 | Br. 8.5 | 95.2 | 166.16 | 100.702 | in Gházípúr district at par with |
| trisúlí ..... | 173.05 | Br. 4.5 | 93.5 | 161.87 | 98.110 | Benáres rupees. |
| Gokul rupee ..... | 172 80 | Br. 3 | 92.9 | 160.56 | 97.309 | |
| Gomansáhí, 1819 ... | 171.25 | standard | 91.7 | 156.98 | 95.139 | See Bundí. |
| 1825 ... | 172.98 | Br. 5 | 93.7 | 162.17 | 98.283 | Equalized to the Indor standard. |
| Gopál sáhí ..... | 172.50 | Br. 3 | 92.9 | 160.28 | 97.140 | Madras. |
| Gurumatkal, 1..... | 172.30 | Wo. 24.5 | 81.5 | 140.35 | 85.063 | Haidarábád Bágh chalaní. |
| 2..... | 172.00 | Wo. 18.5 | 84.0 | 144.41 | 87.520 | „ Shahr chalaní. |
| 3..... | 170.00 | Wo. 39.5 | 75.2 | 127.85 | 77.487 | „ Hukm chalaní. |
| Govind bakhshí, 1... | 170.80 | Wo. 20 | 83.3 | 142.33 | 86.262 | Aurangábád Bágh chalaní. |
| 2... | 171.50 | Wo. 25 | 81.2 | 139.3 | 84.451 | Do. Shahr chalaní. |
| 3... | 170.50 | Wo. 19 | 83.7 | 142.79 | 86.542 | Do. Hukm chalaní. |
| 1832... | 169.38 | Wo. 25 | 81.2 | 137.62 | 83.406 | See Shamshírí, paid to troops at 120 per 100 Fd. or By. Rs. |
| Gwáliár ..... | 171.30 | Br. 6 | 94.1 | 161.31 | 97.763 | The best of Sindia's coins. |
| Gurrahkotá ..... | | | | | | Debased Bálásáhí. |
| Hálí ..... | | | | | | See Puna, Ujjáin, etc. |
| Hatras ..... | 171.60 | Br. 9 | 95.4 | 163.73 | 99.27 | |
| Holkar sáhí ..... | 168.60 | Wo. 1 | 91.3 | 153.84 | 93.240 | Coined by Holkar at Indor? |
| Hukarí ..... | 172.60 | Wo. 22.5 | 82.3 | 152.03 | 86.082 | Coined at Marech. |
| Hurda ..... | 172.59 | standard | 91.7 | 158.20 | 95.881 | Called Hálí, in Málwa |
| Haidarábád, 1..... | 174.10 | Wo. 17 | 84.6 | 147.03 | 89.106 | Bágh chalaní, 'palace currency.' |
| 2..... | 173.50 | Wo. 17 | 84.6 | 146.75 | 88.942 | Shahr chalaní, 'city currency,' see p. 25. |
| 3..... | 170.50 | Wo. 18.5 | 84.0 | 143.15 | 86.757 | Hukm chalaní, 'ordered currency.' |
| 1823..... | 173.38 | Wo. 18 | 84.2 | 145.93 | 88.440 | Coined at Calcutta. |
| 1832..... | 172.66 | Wo. 21 | 82.9 | 143.16 | 86.765 | Bágh chalaní. |
| | 170.20 | Wo. 35 | 77.0 | 131.19 | 79.511 | Shahr chalaní |

[1] Average of one thousand six hundred and eighty, melted in 1833. The Persian coins are struck in many different towns, the principal mint being at Shíráz.

| Name. | Weight | Assay. | Touch. | Pure contents. | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | dwts. | | Grains. | Pd. Rs. | |
| Imámí | 175.24 | Br. 10.5 | 96.0 | 168.31 | 102.003 | Struck by Tipú Sultán, rare. |
| Indor, 1819 | 172.00 | Br. 7.5 | 94.8 | 163.04 | 98.813 | Proper weight 174.5, current throughout Málwá at par with English rup. See Sálimsáhí. |
| 1832 | 172.90 | Br. 6 | 94.1 | 162.81 | 98.674 | |
| Jaláon | 168.80 | Wo. 12 | 86.6 | 146.29 | 88.662 | Rájá Pratáp Singh of Srinagar, established 1809, abolished in 1826. |
| Jhánsí | 170.00 | Wo. 15.5 | 85.2 | 144.85 | 87.790 | Bundelkhand, abolished 1826. |
| Jhínd | 168.50 | Wo. 19 | 83.8 | 141.12 | 85.526 | Doáb. |
| Jodhpúr | 174.00 | Br. 9.5 | 95.6 | 166.39 | 100.841 | Current in Málwá. |
| | 168.30 | Wo. 26 | 80.8 | 136.04 | 82.450 | Similar to Srísáhí. |
| Jamkandí | 175.00 | Br. 2 | 92.5 | 161.87 | 98.104 | Exchange 2 pr. cent. under Ankúsí. |
| Jabalpúr | 167.38 | Wo. 6 | 89.2 | 149.25 | 90.455 | In 1800, 11 máshas; 1803, 10 máshas; 1813, 9 máshas, 6 rupees: at par with Nágpúr. |
| Jagádharí | 165.30 | Wo. 12.5 | 86.4 | 142.92 | 86.615 | Coined at Nasuk, |
| Jarípatká | 171.60 | Wo. 1 | 91.2 | 156.58 | 94.896 | Khándesh. |
| Jaidur | 173.50 | Br. 6 | 94.1 | 163.38 | 99.017 | Jaigarh? Dihlí district. |
| | 172.00 | Br. 5.5 | 93.9 | 161.61 | 97.944 | |
| Jainagarí | 172.68 | Wo. 3 | 90.4 | 156.10 | 94.608 | Current in Ahmadnagar and Gujarát. |
| Jaipúr | 174.00 | Br. 12 | 96.7 | 168.20 | 101.939 | Present currency. |
| Kachar | ..... | ..... | ..... | ..... | ..... | See Náráyaní. |
| Kárhána | 172.80 | Wo. 18 | 84.2 | 145.44 | 88.145 | |
| Keraulí | 171.37 | Br. 8.5 | 95.2 | 163.16 | 98.877 | |
| Kittor-shápurí | 174.00 | Wo. 12.5 | 86.5 | 150.44 | 91.175 | Original Shápúrí (q.v.) |
| Kocháman | ..... | ..... | ..... | ..... | ..... | Jodhpúr, Bápúsáhí. |
| Korá, san 8 | 168.76 | Wo. 5 | 89.6 | 151.18 | 91.623 | 1769, full wt. 170.5 |
| san 12 | 168.73 | Wo. 10.5 | 87.3 | 147.29 | 89.269 | current in Allahábád: mostly melted up and recoined. |
| san 20 | 168.36 | Wo. 14 | 85.8 | 144.51 | 87.581 | |
| Kosí | 167.05 | Wo. 18 | 84.2 | 140.60 | 85.212 | |
| Kosá | 171.64 | Wo. 32 | 78.3 | 134.45 | 81.485 | Haidarábád (1832). |
| Kúmhír | 171.00 | Br. 8 | 95.0 | 162.45 | 98.454 | Near Bhartpúr. |
| Kotá, old | 172.65 | Br. 13.5 | 97.3 | 167.97 | 101.803 | Kotá Rájá has mints |
| 1825 | 174.02 | Br. 14 | 97.5 | 169.67 | 102.830 | also at Jatrapatan and Gágraun. |
| Katch kaurí | 72.15 | Wo. 73.5 | 61.0 | 43.56 | 26.400 | Coined at Anjar, Katch. |
| Lálágorá | 171.50 | Wo. 6.5 | 89.0 | 152.15 | 92.210 | Coined by Gen. Lally: |
| Lárin | 74.50 | Br. 11.5 | 96.5 | 71.86 | 43.553 | Of Persia and Arabia |
| Lassa | 58.00 | Wo. 30.5 | 79.2 | 45.91 | 27.827 | Chah Chin coin or Tsang-pahu. |
| Lukhnow, old | 172.33 | Br. 12 | 96.7 | 166.58 | 100.957 | Coined by the Nawáb Vazír. |
| (Fd. sd.) 45th san. | 173.00 | Br. 9.2 | 95.5 | 165.21 | 100.127 | Called Machhlísáhí. |
| Srí sháhí | 172.12 | Br. 11 | 96.2 | 165.67 | 100.405 | By King Asaf-ud-daulah. |
| 1824 | 172.12 | Br. 6 | 94.1 | 162.08 | 98.231 | This year's coinage; |
| 1831 | 172.10 | Br. 11 | 96.2 | 165.69 | 100.413 | inferior. (A.H. 1239-40.) |
| Mádipúr | 173.75 | Wo. 6 | 89.2 | 154.93 | 93.895 | Or Nousee; (Kelly). |

| Name. | Weight. | Assay. | Touch. | Pure contents. | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | dwts. | | Grains. | Rs. As. | |
| Mádairí | 174.28 | Br. 5.5 | 94.0 | 163.75 | 99.240 | |
| Madras, old | 176.40 | Br. 6 5 | 94.4 | 166.48 | 100.895 | Old Arkát rup. by law |
| Rájápúrí | 175.00 | Br. 7 | 94.6 | 165.52 | 100.315 | Coined at Rájápúr. |
| rupee of 1811 | 186.70 | Wo. 5.5 | 89.4 | 166.48 | 100.895 | Coined from Spanish dollars. |
| half pagoda | 326.73 | Wo. 5.5 | 89.4 | 291.34 | 176.570 | = $1\frac{3}{4}$ Arkát rupee. |
| 5-fanam | 71 51 | Wo. 4 | 90. | 64.36 | 39.008 | By Calcutta assay. |
| 2-fanam | 28.75 | Wo. 5 | 89.6 | 25.76 | 15.609 | ,, |
| 1-fanam | 14.31 | Wo. 4.5 | 89.8 | 12.85 | 7.785 | ,, |
| double rupee | 370.89 | Wo. 4.5 | 89.8 | 333.03 | 201.834 | ,, |
| rupee | 187.48 | Wo. 4.5 | 89.8 | 168.34 | 102.024 | ,, |
| new standard | 180.00 | Standard | 91.7 | 165.00 | 100.000 | 1818; present currency. |
| Madhushâhí | 174.05 | Br. 12.5 | 96.9 | 168.61 | 102.188 | New Holkar, Indor, |
| Maheswarí | 173.25 | Br. 7.5 | 94.8 | 164.23 | 99.530 | Coined at Maheswar by Holkar; same as Ujjain and Indor. |
| Muhammadsháhí | 173.30 | Br. 8.5 | 95.2 | 165.00 | 100.000 | Dihlí Muhammadsháhí? |
| Mámúsáhí | 177.75 | Wo. 5.5 | 89.4 | 158.86 | 96.281 | Baroda. |
| Malabar | 172.84 | Br. 3.5 | 93.1 | 160.96 | 97.549 | |
| Mámásáhí | 169.50 | Wo. 2.5 | 90.7 | 153.61 | 93.096 | Current in Ahmadnagar and Gujarát. |
| Máshirábád | 171.40 | Wo. 6.5 | 89.0 | 152.47 | 92 409 | (Old) from Madras. |
| new | 168.20 | Wo. 2.5 | 90.6 | 152.43 | 92.382 | |
| Marech hakárí | 172.60 | Wo. 17.5 | 84.4 | 145.67 | 88.287 | Coined at Marech. Bijapúr. |
| Mullasahí | 172.40 | Br. 8 | 95.0 | 163.78 | 99.260 | Súrat? |
| Malhásáhí | 165.87 | Wo. 6.5 | 89.0 | 147.55 | 89.425 | Súrat (Noton). |
| | 165.88 | Wo. 6 | 89.2 | 147.91 | 89.642 | Current in Málwá. |
| Mudhôl | 173.00 | Wo. 82 | 57.5 | 99.47 | 60.284 | Coined by Málijí Ráo in 1790. |
| Murshidábád | 179.666 | Br. 15 | 98.0 | 175.923 | 106.620 | Old sikká rupee (See Calcutta.) |
| Mag rupee | 152.80 | Wo. 14.9 | 29.6 | 49.31 | 29.886 | Average of 1400, assayed in 1833. |
| Makansáhí | 176.62 | Wo. 10.5 | 87.3 | 154.17 | 93.439 | Coined at Baroda. |
| Malhársáhí | 172.30 | Wo. 5 | 89.6 | 154.35 | 93.546 | Coined at Bagalkotá (Holkar). |
| Mulkápúr | 173.20 | Wo. 46.5 | 72.3 | 125.21 | 75.884 | Near Burhánpúr. |
| Mangalsáhi | 178.50 | Wo. 7 | 88.8 | 158.41 | 96.012 | (Kelly.) |
| Mutysáhí | 173.30 | Br. 8 | 95.0 | 164.73 | 99.833 | Achmuty, collector, Allahábád. |
| Mathurá | 167.30 | Wo. 13.5 | 86.0 | 143.95 | 87.241 | |
| Mysore | 174.28 | Br. 7.5 | 94.8 | 165.20 | 100.125 | Maheswar? Holkar's. |
| Nágpúr, old | 168.65 | Wo. 0.5 | 91.5 | 154.24 | 93.481 | Nishándár, before 1817. |
| new | 166.53 | Wo. 13.5 | 86.0 | 143.28 | 86.838 | Náldár, after 1817. |
| 1824 | 166.53 | Wo. 28.5 | 79.8 | 132.87 | 80.530 | Debased until 1824. |
| present | 166.20 | Wo. 17.5 | 84.4 | 140.23 | 84.988 | Reformed in 1824. |
| Náráyaní | 142.23 | Wo. 22 | 86.7 | 117.34 | 71.116 | The Kachár rupee; |
| | 143.17 | Wo. 30 | 79.2 | 113.34 | 68.690 | current in Rangpúr, etc. assayed in 1832. |
| | 137.15 | Wo. 25.5 | 81.0 | 111.15 | 67.364 | |
| Náráyanpat | 170.00 | Wo. 32 | 78.3 | 133.17 | 80.707 | Haidarábád rupee, coined at Náráyanpat |
| ,, | 172.50 | Wo. 26 | 80.9 | 139.55 | 84.557 | By Noton full weight |
| Narwár | 170.00 | Wo. 95 | 87.7 | 149.10 | 90.366 | [Pádsháhpúr. |
| Nepání | 173.00 | Wo. 38.5 | 75.7 | 130.96 | 79.383 | A Maráthí coin, 1803 |

| Name. | Weight. | Assay. | Touch. | Pure contents. | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | Dwts. | | Grains. | Fd. Rs. | |
| Nepál ..... | | | | | | These are coins of the Gorkha dynasty of Nepál princes, Girván Yudh and the present Rájá Rájendra Vikrama Sáh. They are the average of a number assayed in 1832. The coins of the old or Newár dynasty are of the same standing. They are called muhrs, see p. 32. |
| A.D. Sáka. | | | | | | |
| 1808 1731 | 85.00 | Wo. 21 | 82.9 | 70.48 | 42.714 | |
| 1810 1733 | 83.75 | Wo. 32 | 78.3 | 65.60 | 39.760 | |
| 1811 1734 | 84.67 | Wo. 28 | 80.0 | 67.73 | 41.050 | |
| 1813 1736 | 84.40 | Wo. 37 | 75.1 | 64.35 | 39.003 | |
| 1815 1738 | 84.58 | Wo. 50 | 70.9 | 59.92 | 36.316 | |
| 1817 1740 | 85.05 | Wo. 43 | 73.7 | 62.72 | 38.014 | |
| 1818 1741 | 84.96 | Wo. 43 | 73.7 | 62.65 | 37.973 | |
| 1819 1742 | 83.77 | Wo. 55.5 | 68.5 | 57.42 | 34.799 | |
| 1820 1743 | 84.66 | Wo. 33 | 77.9 | 65.96 | 39.977 | |
| 1822 1745 | 85.57 | Wo. 26 | 80.8 | 69.17 | 41.922 | |
| 1823 1746 | 85.23 | Wo. 24.5 | 81.5 | 69.43 | 42.078 | |
| 1824 1747 | 85.47 | Wo. 31 | 78.7 | 67.30 | 40.790 | |
| Average | 84.76 | Wo. 35.3 | 76.8 | 65.23 | 39.522 | |
| Najíbábád ..... | | | | | | Current in Rohilkhand and Murádábád. Received at 106 per 100 Fd. Rs., see p. 32. |
| sun, 20 to 29 | 173.00 | Br. 12 | 96.7 | 167.23 | 101.353 | |
| 30 to 40 | 171.00 | Br. 6 | 94.1 | 161.02 | 97.591 | |
| 41 to 43 | 169.30 | Br. 1 | 92.1 | 155.90 | 94.483 | |
| Nasúrábád ..... | 170.20 | Br. 6 | 94.1 | 160.27 | 97.134 | |
| Udipúr ..... | 167.45 | Wo. 32.5 | 78.1 | 130.82 | 79.285 | Sindiasáhí? Mewár. |
| Ujjain, 1832 ..... | 174.64 | Br. 4 | 93.3 | 162.99 | 98.783 | Average of 100. See Maheswar. Struck by Sindia. |
| Oukarí ..... | 175.00 | Wo. 17 | 84.6 | 148.02 | 89.710 | (Kelly's Cambist). Ikkerí. |
| Panáli, old ..... | 170.60 | Wo. 68 | 63.4 | 108.16 | 65.552 | 1760. Struck by Rájá Kárwikar. |
| Pánipat ..... | 171.20 | Br. 0.5 | 91.9 | 157.29 | 95.327 | Dihlí district. |
| Patna ..... | 177.50 | Br. 11.5 | 96.5 | 161.21 | 97.705 | Company's mint, 1793. |
| Parkaní, Nepání ... | 173.00 | Wo. 38.5 | 75.7 | 130.96 | 79.384 | BySidhojí ná'ik 1803 |
| Sembho ..... | 172.75 | Wo. 28.5 | 79.7 | 137.76 | 83.491 | Current in S. Maráthí states. |
| Old ditto ..... | 174.00 | Wo. 4.5 | 89.7 | 156.16 | 94.646 | By Bhusla family, 200 years ago. |
| Mudhol ..... | 173.00 | Wo. 8.2 | 57.5 | 99.47 | 60.284 | ByMálájí Ráo, 1790, rare. |
| newest ..... | 177.90 | Wo. 7 | 88.7 | 157.88 | 95.684 | Coined in the Sáwant state. |
| Persian rupee ..... | 177.25 | Br. 16 | 98.4 | 174.30 | 105.634 | See Fath 'Alí. |
| | 178.00 | Br. 19.5 | 98.2 | 174.66 | 105.856 | |
| Pratápgarh ..... | 170.40 | Wo. 9.5 | 87.6 | 149.27 | 90.466 | [sáhí. Noton. See Sálim- |
| Phulcharí ..... | 174.81 | Br. 9.5 | 95.6 | 167.58 | 101.565 | Phulshahrí? |
| Púlshahrí ..... | 171.70 | Br. 1.5 | 92.3 | 158.46 | 96.039 | Ankusí rupee struck at Phúlshahr. |
| Pondicherry ..... | 175.35 | Br. 9.5 | 95.6 | 167.68 | 101.625 | French Arkát. |
| | 173.98 | Br. 10 | 95.8 | 166.73 | 101.048 | |
| old ... ..... | 173.61 | Br. 11 | 96.2 | 167.09 | 101.269 | [under Purnyá. |
| Rájá ..... | 176.16 | Br. 8 | 95.0 | 167.30 | 101.390 | Struck at Maisúr, |
| Pultí fanam ..... | 5.60 | Br. 5.5 | 94.0 | 5.26 | 3.190 | |
| Puna, old ..... | 176.00 | Br. 12.5 | 96.9 | 170.50 | 103.333 | Old currency. See Ankusí. |
| sri sikká ..... | 172.50 | Br. 1.5 | 92.3 | 159.20 | 96.486 | For present standard |
| hálí ..... | 174.75 | Br. 11.5 | 96.4 | 168.46 | 102.096 | Coined for mercantile purposes. |
| Porebunder kaurí ... | 74.50 | Wo. 52 | 70.0 | 52.15 | 31.606 | Coined at Porebunder, Katch. |
| Rájgarh ..... | 173.75 | Br. 11 | 96.2 | 167.23 | 101.353 | |

| Name. | Weight. | Assay. | Touch. | Pure contents. | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | dwts. | | Grains. | Fd. Rs. | |
| Ráj-muhrí ..... | ..... | ..... | ..... | ..... | ..... | See Assam rupee. |
| Rájsáhí ..... | 169.73 | Wo. 14 | 85.8 | 145.69 | 88.295 | |
| Ráichur 1 ..... | 173.00 | Wo. 4.5 | 89.8 | 155.34 | 94.144 | (Madras table). |
| 2 ..... | 175.00 | Wo. 5.5 | 89.4 | 156.41 | 94.792 | |
| Ráthgarh..... | 168.35 | Wo. 11 | 87.4 | 146.60 | 88.851 | One of Sindia's mints |
| Rikábí ..... | 172.00 | Wo. 10 | 87.5 | 150.50 | 91.212 | |
| | 172.00 | Wo. 12 | 86.6 | 149.07 | 90.343 | |
| Ságar .....1815 | 170.10 | Wo. 8.5 | 88.1 | 149.90 | 90.849 | See Bálásáhí; std. 80 rati silver 10 r. alloy; established |
| 1819 | 170.48 | Wo. 9.5 | 87.7 | 149.52 | 90.624 | in 1782; received at 120 per 100 Fd. Rs. |
| new, 1824 | 180.00 | standard | 91.7 | 165.00 | 100.000 | The Fd. rupee. |
| Saháranpúr..... | 171.00 | Br. 4.5 | 93.5 | 159.96 | 96.943 | Mint abolished in 1806. |
| Sálimsáhí .....29 | 168.11 | Wo. 34.5 | 77.3 | 129.93 | 78.748 | Struck at Pratápgarh, Ajmír, and current throughout Málwá. |
| san, 45 | 168.55 | Wo. 27 | 80.4 | 135.54 | 82.148 | |
| oldest, ... | 168.50 | Wo. 6.5 | 89.0 | 150.00 | 90.909 | Jurmuria, (Macdonald's rept., 1823). |
| 1810 | 168.50 | Wo. 13.5 | 86.0 | 145.00 | 87.878 | Murmuria, ditto. |
| 1820 | 168.50 | Wo. 25.0 | 81.3 | 137.00 | 83.030 | Meláh, ditto. |
| Shámlí ..... | 170.10 | Wo. 1.5 | 91.1 | 154.86 | 93.855 | Dihlí district. |
| Sandoara ..... | 171.30 | Br. 1 | 92.1 | 157.74 | 95.599 | |
| Sarura ..... | 165.00 | Wo. 22 | 82.5 | 136.12 | 82.500 | Sárowí of Ajmír. |
| Sardhana ..... | 171.20 | Br. 2 | 92.5 | 158.36 | 95.975 | Bígam Samrú? |
| Saronj ..... | 168.35 | Wo. 16.5 | 84.8 | 142.75 | 86.516 | Málwa. |
| | 170.91 | Wo. 4 | 90.0 | 153.82 | 93.226 | |
| Sháhpúrí ..... .. | 174.00 | Wo. 10 | 87.4 | 151.98 | 92.118 | Current in Belgaum, Ajmír, etc. |
| Shamshírí .....15 | 172.37 | Wo. 26.5 | 80.6 | 138.89 | 84.130 | Current in Aurangábád. |
| san 21 | 171.51 | Wo. 31.5 | 78.5 | 134.80 | 81.693 | Assayed in 1833, see |
| san 28 | 172.00 | Wo. 28 | 80.0 | 137.60 | 83.395 | Govind bakshí and Haidarábád. |
| Sindiasáhí ..... | ..... | ..... | ..... | ..... | ..... | See Udipúr. |
| Sohágpúr..... | 166.90 | Wo. 24 | 81.7 | 136.30 | 82.607 | Established in 1810, current in Nerbadda. |
| Sonát, Dihlí..... | 178.77 | Br. 15.5 | 98.1 | 175.41 | 106.313 | The years 1 to 19 |
| sábik ..... | 177.57 | Br. 10.5 | 96.0 | 170.54 | 103.358 | inclusive. |
| san 1 to 19... | 179.12 | Br. 16 | 8.3 | 176.13 | 106.747 | Same as sikká rupee. |
| Srí sikká ..... | ..... | ..... | ..... | ..... | ..... | See Puna. |
| Srísáhí ..... | ..... | ..... | ..... | ..... | ..... | See Ajmír, 1815. |
| Srínagar ..... | 170.06 | Wo. 6.5 | 89.0 | 151.28 | 91.686 | In Náná Govind's |
| old..... | 167.50 | Wo. 16 | 85.0 | 142.37 | 86.289 | state. Est. 1794, principal currency of Bundelkhand. See Jáláon. |
| Sunámalla ..... | 173.54 | Br. 0.5 | 91.9 | 159.44 | 96.632 | Súrat. |
| Súrat ..... | 174.50 | Br. 5.5 | 93.9 | 163.96 | 99.367 | Under the Nawáb. |
| old..... | 176.60 | Br. 16 | 98.4 | 173.66 | 105.246 | Old Dihlí standard. |
| | 176.25 | Br. 1 | 92.1 | 162.30 | 98.363 | Depreciated, see p. 24. |
| 1800..... | 178.32 | Br. 2 | 92.5 | 164.94 | 99.966 | Chosen as Bombay rupees. |
| Támbasáhí ..... | 169.90 | Wo. 8.5 | 88.1 | 149.72 | 90.742 | Nickname from copper? |
| Thanna ..... | 170.80 | Wo. 2 | 90.8 | 155.14 | 94.026 | |

| Name. | Weight. | Assay. | Touch. | Pure contents | Intrinsic value of 100. | Remarks. |
|---|---|---|---|---|---|---|
| | Grains. | dwts. | | Grains. | Fd. Rs. | |
| Ti-másha or (three máshas) ..... | 34.30 | Br. 3 | 92.9 | 31.87 | 19.315 | Coined in Nepál? current in Srínagar. |
| | 28.10 | Wo. 51 | ... | 15.62 | 9.467 | Ditto, debased. |
| of Ladakh ..... | 40.00 | Br. 12.5 | 96.9 | 38.75 | 23 484 | Coined at Lassa. |
| Topísáhí ..... | 165.12 | Wo. 22.5 | 82.3 | 135.88 | 82.354 | |
| Toragal Nilkant ... | 170.00 | Wo. 71 | 62.0 | 105.40 | 63.873 | Struck by Bálá Sáhib, 1788 B. |
| Toka..... | 172.24 | Wo. 27 | 80.4 | 138.51 | 83 944 | Aurangábád, (1832). |
| Tukásáhí ..... | 173.16 | Br. 5.5 | 94.0 | 162.77 | 98.648 | Current in Ahmadnagar. (Noton). |
| Trinámáli ..... | 176.50 | Br. 8 | 95.0 | 167.67 | 101.618 | Karnátic. |
| Venkatapati ..... | 172.72 | Br. 11 | 96.2 | 166.25 | 100.756 | Ditto. |
| Vazírí ..... | 168.62 | Wo. 11.5 | 86.9 | 146.49 | 88.783 | Sohágpúr, in hilly tract E. of Jabalpúr. |
| Vazírsháhí ..... | 170.00 | Wo. 13 | 86.3 | 146.62 | 88.864 | |
| Wabgaum ..... | 172.55 | Wo. 0.5 | 91.5 | 157.88 | 95.684 | Current in the Dakhan. (Noton). |
| Yeswantí ..... | 174.95 | Br. 7.5 | 94.8 | 165.84 | 100.500 | Struck by Jeswant Ráo Holkar, 1806[1] |
| Zu'lfikr ..... | 174.10 | Wo. 17.5 | 84.4 | 147.03 | 91.06 | See Haidarábád. |

(To convert the decimals of the last column into ánás and pá'ís, see the Table at page 12. For explanation of the present Table, see page 36.)

[1] This curious and handsome coin (for a specimen of which I am indebted to Major Stacy), might be mistaken for an antique from its bearing the following Sanskrit inscription in well-cut Nágarí characters, on the obverse and reverse respectively.

श्री इन्द्रप्रस्थस्थितो राजा चक्रवर्त्ती भूमण्डले ।
तत्प्रसादात् कृता मुद्रा लोकेस्मिन् वैविराजिते ।

श्री लक्ष्मीकान्तपदांभोजभ्रमराजितचेतसः ।
येशवन्तस्य विख्याता मुद्रैषा पृथिवीतले ॥
शके १७२८

*Sri. Indraprasthasthito rájá chakravartti bhúmandale,*
*Tatprasádát kritá mudrá lokesmin vaivirájite,*

*Sri. Lakshmikántapadámbhojabhramarájitachetasah,*
*Yesawantasya vikhyátá mudraishá prithivitale.*

"By the permission of the Rájá of Indraprastha (the king of Dihlí), the Emperor of the world, this coin has been struck by the renowned Yesawant (Jeswant Ráo Holkar), whose heart is as the black bee of the lotus foot of Lakshmikánt,—to circulate throughout the earth. An. Sakæ 1728" (= A.D. 1806).

## ASSAY *of Bullion generally, brought to the Calcutta Mint.*

| Denomination. | | Assay. | Intrinsic of 100 tolás in Fd. Rs. | Produce in sikká rupees. |
|---|---|---|---|---|
| South American bars marked ..... | 24 din. | Br. 20 | 109 091 | 102.273 |
| | 11 22 | Br. 17.5 | 107.954 | 101.207 |
| | 11 17 | Br. 14 | 106.364 | 99.716 |
| | 11 10 | Br. 8 | 103.636 | 97.159 |
| Plata pina recovered from amalgamation ... ..... | ..... | Br. 17.5 | 107.954 | 101.207 |
| China cakes, large: *háthí khurí* (elephant-hoof)..... | ..... | Br. 16 | 107.273 | 100.569 |
| Ditto, small *ghorá khurí* (horse-hoof) | ..... | Br. 14.5 | 106.591 | 99.929 |
| Calcutta refined cakes, called Madrasí | ..... | Br. 15.5 | 107.045 | 100.355 |
| „ Murshidábádí ..... | ..... | Br. 15 | 106.818 | 100.142 |
| „ Dacca ..... | ..... | Br. 12 | 105.454 | 98.863 |

## ASSAY *of Ava Silver Cakes.*

| Burmese denomination.* | Meaning of Ava Assay Report. | Touch. | Calcutta Assay Report. | Touch. | Value of 100 tikals in Fd. Rs. |
|---|---|---|---|---|---|
| Ban (supposed to be pure) ... | pure silver ..... | 100 | Br. 16.5 | 98.6 | 151.57 |
| Kharoobat (shell circled) ..... | 5 pr. ct. under do. | 95 | Br. 6.5 | 94.3 | 145.16 |
| Dain, ta kyat det ..... | 10 pr. ct. above st. | 93.5 | Br. 2 | 92.5 | 142.28 |
| „ ko moo det ..... | 9 pr. ct. „ | 92.6 | standard | 91.7 | 141.00 |
| „ sheet moo det ..... | 8 pr. ct. „ | 91.8 | Wo. 4 | 90.0 | 138.44 |
| „ kwon, neet moo det ... | 7 pr. ct. „ | 90.9 | Wo. 3 | 90.4 | 139.08 |
| „ nga moo det ..... | 5 pr. ct. „ | 89.7 | Wo. 5 | 87.6 | 137.79 |
| Madain (alloyed dain) ..... | ? | ... | Wo.42 | 74.1 | 114.08 |
| Yowetnee (red flowered or star) | Ava standard | 85.0 | Wo. 4 | 90.0 | 138.44 |
| „ kyat gé ..... | 10 pr. ct. alloy | 77.3 | Wo.14 | 85.8 | 132.03 |
| „ tshay nga kyat gé ..... | 15 pr. ct. „ | 73.9 | Wo.38.5 | 75.6 | 116.32 |
| „ nheet tshay gé ..... | 20 pr. ct. „ | 70 8 | Wo.34 | 77.5 | 119.21? |
| „ thoun tshay gé ..... | 30 pr. ct. „ | 65.4 | Wo.72 | 61.6 | 94.85 |
| „ le tshay gé ..... | 40 pr. ct. „ | 60.7 | Wo.77 | 59.6 | 91.65 |
| „ nga tshay gé ..... | 50 pr. ct. „ | 56.7 | Wo.88 | 55.0 | 84.60 |
| „ kyouk tshay gé ..... | 60 pr. ct. „ | 53.1 | Wo.109 | 50.4 | 71.14 |
| „ khwon nheet tshay gé.. | 70 pr. ct. „ | 50.0 | Wo.107 | 51.3 | 72.42 |
| „ sheet tshay gé..... | 80 pr. ct. „ | 47.2 | Wo.112 | 49.3 | 69.22 |
| „ ko tshay gé..... | 90 pr. ct. „ | 44.7 | Wo.116 | 43.5 | 66.65 |
| Yowetnee gyan ..... | ½ yowetnee, ½ alloy | 42.9 | Wo.131 | 37.0 | 57.04 |
| Rangoon yowetnee ..... | 5 per cent. better than Ava stand. | 90.0 | Wo. 4 | 90.0 | 138.44 |

(A deduction of 1 per cent. should be expected from the produce of Ava bullion, on account of the vitreous coat of litharge which adheres to the lumps).

This table is abstracted from the examination of thirty-five specimens of silver specially prepared in Ava, in presence of the Resident, for the comparison of the Burmese with the English assay.

* See page 34.

## TABLE *of Copper Coins.*

(Where not otherwise mentioned, the name tells the place of coinage and circulation. Since 100 grains is the weight of the present paisá, the column of weight also expresses the intrinsic value of 100 of each sort in Company's paisá.)

| Name. | Weight in troy grains. | Usual rate per rupee. | Where current. Remarks. |
|---|---|---|---|
| Agra paisá ..... | 148 | 60 | Current in the Agra district. |
| Akbarí, old ..... | 300 | 30 | Ditto, but scarce. |
| Allahábád ..... | 141 | ... | |
| Almorah ..... | 83 | ... | [208 grs.) |
| American cent ..... | 167 | ... | One cent, 1810: (by law of 1790, should be |
| Azimgarh ..... | 170 | ... | Square, Hindí inscription. |
| Bálásáhí ..... | 255 | ... | Throughout Kalpí, Ságar, etc. |
| Barellí ..... | 149 | 40 | |
| Bahár ..... | 101 | 64 | See Patna. |
| Benáres ..... | 98¼ | 64 | By Regulation X. of 1809, Trisulí paisá; also Reg. VII. 1814. (See page 8 and 39. |
| Bhilára ..... | 307 | ... | |
| Bhilsa .....<br>Bhopál .....<br>Bishennáth ..... | 225 | ... | |
| Bombay, 1797 ..... | 212 | 48 | Marked '48 to one rupee, 4 V. E I.C.' and arms. |
| 1804 ..... | 200 | 50 | Coined in England; device, arms, and scales, 'Adl.' |
| 1832 ..... | 100 | 64 | New coinage, with the same device. |
| Bhartpúr ..... | 275 | 32 | |
| Bundí ..... | 274 | 32 | |
| Calcutta, 1782 ..... | 52? | 192? | First pá'í struck by contract at Pulta. |
| 1792 ..... | 40 | ? | Marked 'o. V. c. 1792,' and on the reverse a shield and crest. |
| 1795 ..... | 180 | 64 | Quarter-ánáa, reduced on the 4th May, 1796, |
| 1796 to 1809 | 135 | 64 | to 12 ánás weight, and afterwards in 1809, |
| 1809 to 1817 | 101 | 64 | to 9 ánás, the weight of the Bahár paisá. |
| 1817 ..... | 100 | 64 | Present standard weight by Reg. XXV. of 1817 |
| half ánáa ..... | 200 | 32 | By Regulation III. of 1831. (See page 4.) |
| one pá'í ..... | 33⅓ | 192 | |
| Ceylon ..... | 137 | ... | Coined in England, device an elephant, 'two stivers;' the one-, and the half-, stiver in proportion. |
| Chikna ..... | 240 | 30-32 | The Madhusáhí worn smooth: throughout Banda. |
| Chinawa ..... | 190 | ... | Chinanía? In Láhor, near Kangra. |
| China ..... | 660 | ... | Brass coin with square holes, various sizes. |
| Chalan ..... | 240 | 32 | Same as Chikna, current in the Doáb. |
| Dihlí ..... | 172 | 44-60 | Coined until 1818, weight one tolá, or 80 to the ser. |
| Dutch ..... | 230 | ... | Square lump, marked 'two strs.' |
| " ..... | 120 | ... | Tranquebar, rude coin marked 'one str.' |
| English penny ..... | 412 | ... | Old penny-piece. |
| new | 290 | ... | New penny, legal weight 291.6 grains. |
| French sous ..... | 150 | ... | Brass, five centimes, legal weight 154 grains. |
| Farrukhábád ..... | 284½ | 26 | Prescribed by Reg. III. 1806 (not coined). |
| 1816 | 100 | 64 | Established by Regulation XXI. of 1816. |
| Gokula or Gandasahí ..... | 110 | 70 | Current from Mathurá to Mainpúrí. |

| Name. | Weight in troy grains. | Usual rate per rupee. | Where current. Remarks. |
|---|---|---|---|
| Gorakhpúr ..... | 186 | 26-36 | Benáres district, former standard paisá. |
| Gwáliár, old..... | 146 | 62 | Marked Muhammad Akbar Sháh. |
| Hádewá ..... | 296 | ... | Near Nágpúr. |
| Hátras ..... | 280 | 34 | Current in Nágpúr. |
| Indor ..... | 115 | ... | In Málwa generally. |
| Jaláon ..... | 252 | 40 ? | Bandalkhand, the Bálásáhí paisá. |
| Java, 1814 ..... | 172 | ... | Marked '1st. B.V. E.I.C.' |
| Jhánsí ..... | 260 | ... | Current in Bandalkhand. |
| Jabalpúr ..... | 260 | ... | Narbaddá valley. |
| Jaipúr ..... | 280 | 32½ | Agra and Jaipúr districts. |
| Kukureti ..... | 252 | 40-48 | Near Panná in Bandalkhand: bears a device, resembling a Hanumán—3120 per man. |
| Khetrí ..... | 252 | ... | ? Kukureli or Kukureti. |
| Karolí ..... ..... | 281 | 36 | Current at Dihlí and Karolí. |
| Madras, 1803 ..... | 180 | ... | XX.-kás piece, coined in England. |
| 1808 ..... | 120 | ... | Three falús, or one falam khurd (little fanam). |
| 1832 ..... | 100 | 64 | Equalised with Bengal and Madras paisá. |
| Kotá..... | 275 | 34 | In Kotá, Ajmír, etc.: a square coin. |
| Lukhnow, old ..... | 195 | ... | Machhlísáhí, } Current in Oudh and Kanouj |
| new ... | 185 | 46 | Shírsáhí, } to Mainpurí. |
| 1806 ... | 284½ | 26½ | See Farrukhábád. |
| Madhusáhí ..... | 270 | 35-40 | Chief currency of Allahábád and the Doáb, formerly of Benáres and Mírzapúr. |
| Maiwár ..... | 34 | 378 | A very small coin. |
| Marwar ..... | 330 | ... | |
| Muzaffarábád ..... | 190 | ... | |
| Mansúrí ..... | 169 | 58 | In Agra, etc. |
| Mathurá, old ..... | 147 | 46½ | } |
| new ..... | 135 | 68 | } Agra, Mathurá, Bindrában, etc. |
| double ... | 270 | 34 | } |
| Nazir Sháh ..... | 131 | ... | Son of Ghias-ud-dín Sháh: ancient square paisá of Ságar district. |
| Nepál ..... ..... | 207 | ... | Current in the Turái. |
| ,, paisá..... | 164 | 80 | Bahádursáhí, coined and current in Nepál. |
| Najíbábád ..... | 243 | 40 | In Barellí and Rohilkhand. |
| Nagar ?..... | 176 | ... | Marked 'Nagar 5221,' device, a rude elephant; some have 'Pan, Patan,' or Zarb-i patan.' |
| Narwar..... | 107 | ... | In the Narbaddá Territories. |
| Nawásáhí..... | 197 | 47 | Old Lukhnow, so called. |
| Patna, old ..... | 240 | 32 ? | Of native fabrication. |
| 1817..... | 101 | 64 | Coined at Patna and Calcutta. |
| Penang..... | 133 | ... | One hundred to the dollar: and halves. Coined in England. Current in Penang, Singapore, and the Malay peninsula. |
| Patiála (Rájásáhí) | 170 ? | ... | Current in Patiála, Dihlí, etc. |
| Rájgarh ..... | 274 | 36 | |
| Rájmahal..... | 109 | ... | Coined at Rájmahal. |
| Rewásáhí..... | 220 | 46 | In Rewá ? device, a kind of Nágarí figure one ९ |
| Ságar ? ..... | ... | ... | See Bálásáhí. |
| Supúr ..... | 173 | ... | The 'Nagar' paisá, so called by the natives. |
| Saháranpúr ..... | 255 | 35 ? | Also called Álamsáhí. |
| Tarí ..... | 254 | 42½ | ? Tehrí. |
| Tehrí ..... ..... | 260 | 43 | In Bandalkhand, equal to Jhánsí. |
| Tirlangá ..... | 150 | ... | Telinga, or Southern India. |
| Tranquebar ..... | 120 | ... | Dutch, marked 'I St.' (one stiver). |
| Udipúr..... | 65 | 160 | About double the Maiwárí. |

The weights, unless otherwise stated, are taken from specimens collected chiefly at Benáres.

## SYMBOLS, ETC. ON MODERN INDIAN COINS.

Before giving the Catalogue of Symbols figured in plate xlv., it will be convenient to direct the reader's attention to plate xlvi., which gives such samples of the modern coins of India as will enable him to recognise their principal varieties at sight. Those of Nepál, Assam, Kachar and Lassa, are sufficiently distinct from the Nágarí, Bengálí, and Tibetan characters on them; the pagodas, also, of South India cannot be mistaken. The Nágarí coin of Kotá may be classified from its Lotus symbol, although it is otherwise difficult to decypher the inscription. But the great majority of coins treated of in the foregoing remarks and Tables are similar to figures 2, 8, 9, 10, 11, and 12, which exhibit portions only of a Persian inscription, generally of very imperfect execution. These can only be known by the signs or symbols of the various States inserted in some conspicuous part of the impression: thus, No. 11 is known to be of Indor, from the Solar effigy. The following particulars of the coins in plate xlv. will save the necessity of any further general remarks, in addition to those already made at page 40.

1. THE 19TH SAN SIKKÁ RUPEE.

Now [and up to 1835] coined at the Calcutta mint; bearing the Sháh 'Alam distich, explained in page 2. All the Company's silver and gold money of Bengal, up to the present day, is of the same style, containing the whole inscription, of which parts only are visible on most of the native coins.

2. THE OLD SÁLIMSÁHÍ RUPEE.

Current in Málwá, and coined by the Rájá of Pratápgarh. The words visible on the

Obverse: شاه عال حامي

(intended for *Sháh 'Alam ḥámí ud-dín*, etc.) and the Hijra date, 1199, which, however, does not correspond with the year of reign on the

Reverse:

سنه جلوس ميمنت ٢٩ مانوس

'29th year of the prosperous reign.'

This is the earliest year of the coinage of these rupees; those of the 45th san were in course of coinage in 1823. They were issued to the troops at the exchange of 122.8 per 130 Farrukhábád rupees.

3. THE BAJRANGGARH RUPEE.

(Near Kotá Bundí) known by the Lotus symbol; coined by a petty zamíndár; much debased. In the Bhákhá dialect,

Obverse:

श्री रामचपरासी पवनपुत्र वलपायन

*Sri ráma chaprási pavanputra balapáyan* 'All-powerful son of the air (Hanumán) servant of Ráma.'

# Existing Coins of India.

after J. Prinsep.

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Reverse:

यसपर छापा में राजा जयसिंघ के २१ जयनगर[1]

*Is par chhápá men rájá Jay Singh ke 21 Jayanagar.* 'On this coin is imprinted the 21st (year) of Rájá Jay Singh at Jaynagar.'

The initial and final letters are imperfectly visible on the coin; the purport shews it to be struck at Jaynagar, a village near Bajranggarh.

4. THE NEPÁL MUHR, OR HALF RUPEE.

Obverse:

श्रीश्रीश्री प्रताप सिंह साहदेव १६८६

*SríSríSrí Pratáp Sinh Sáh Deva* (titles of the Rájá) 1686.

Reverse:

श्रीश्रीश्री गोरषनाथ

*SríSríSrí Gorakhnáth*, (the principal god worshipped by the hill people, whence their name of 'Gorkhas' is derived.)

Centre:

श्रीश्रीश्री गुह्येश्वरी

*SríSríSrí Guhyeswarí*, 'the omniscient goddess Devi.'

5. AN ASSAMESE RUPEE.

Of an octagonal form. The inscription is in the Bengálí character, but in the Sanskrit language.

Obverse:

শ্রী শ্রী হর গৌরী পদাম্বুজ মধুকরস্য

*SríSrí Hara Gauri padámbuja madhukarasya*, 'The sipper of the honey of the foot of Srí Hara Gauri.'

Reverse:

শ্রী শ্রী মত্ স্বর্গ দেব রুদ্র সিংহস্য শাকে ১৬৩০

*SríSrí mat Swarga Deva Rudra Singhasya. Sáke* 1630, 'The blessed and celestial Rudra Singh.' The Sáka date corresponds to A.D. 1708.

6. A KACHAR RUPEE.

In this the Bengálí letters are connected together by parallel lines.

Obverse: The inscription is not intelligible.

Reverse:

শ্রী গিরীশ চন্দ্র নারায়ণ।

*Sri Giris Chandra Náráyana* (the Rájá's name).

7. CHINESE-TIBET SILVER MONEY.

Coined at Lassa (*vide* page 33). On the obverse, in the Tibetan character, *gtsang pahu*, 'pure money,' *chah hchhin* (name of the Chinese Emperor). On the four corners of the margin of another coin similar to the one depicted, are the four letters *nyi hu rtsa lna* (25) meaning the twenty-fifth year of the cycle of sixty years (= A.D. 1831): the date on the coin in the plate is not decypherable. The Chinese

[1] The plate states it to be a Pratápgarh rupee, as it was labelled in the Assay-office cabinet; but on reference to Major Stacy, at Nasírábád, it turns out to be as above. The inscription was read by a pandit at that place, who makes the last words, '*Jayasingh ke rdj Jayapúr men*;' but I consider the above more consistent with the specimen in my possession.

inscription on the reverse consists of four words, *ka-hen poo-chung*, 'the Emperor Ka-hen's[1] precious money.'

8. THE ARKÁṬ RUPEE.

The full inscription of this (the Madras) coin is given in page 3. It is known by the part of ارکاٹ visible, and by the groups of four dots and the lotus or lily.

9. THE SÁGAR RUPEE.

In this the Sháh 'Alam distich can barely be traced. The trident, star, and flag of Siva are its distinguishing marks.

10. THE NÁGPÚR RUPEE.

This coin bears the inscription of Muhammad Sháh. *Sikka mubárik bád(-sháh Ghází Muhammad Sháh)* only recognizable by the two final letters of the Emperor's name. It is known to be of Nágpúr by the भ *bh* (or ध inverted ?) which may stand for Bhunsla, the name of the reigning Rájás of Nágpúr; the '*t*' (*zarb-i ...t*) may be the final letter of Hingan Ghát, the place of coinage.[2]

11. THE INDOR RUPEE.

Parts of the words *Sháh 'Alam bádsháh* are here visible, and the usual year of the reign: the solar disc distinguishes the coin.

12. THE SHÍRSÁHÍ, OR NEW LUKHNOW RUPEE.

Besides the absurd armorial bearings, constructed of two tigers, two fish and a dagger, surmounted by a royal umbrella; this rupee bears the following inscription:

Obverse:

سکه زد بر سیم و زر شاه زمن غازي الدين حيدر عالي از فضل رب ذوالمنن سنه ۱۲۳۸

'The king of the world, Ghází-ud-dín, Haidar 'Alí, by the grace of the Lord of Glory, has struck coin in silver and gold, A.H. 1238.'

Reverse:

ضرب سنه ۵ جلوس ميمنت مانوس دار السلطنة صوبه اوده

'In the 5th year of his illustrious reign, at the capital of the súbah of Oudh.'

13. AN ANCIENT GOLD HÚN,

with part of an inscription in the Sanskrit character on one side, and a single image on the other.

14. A MODERN DOUBLE PAGODA.

Struck at Madras, showing the character of the former English currency of that presidency.

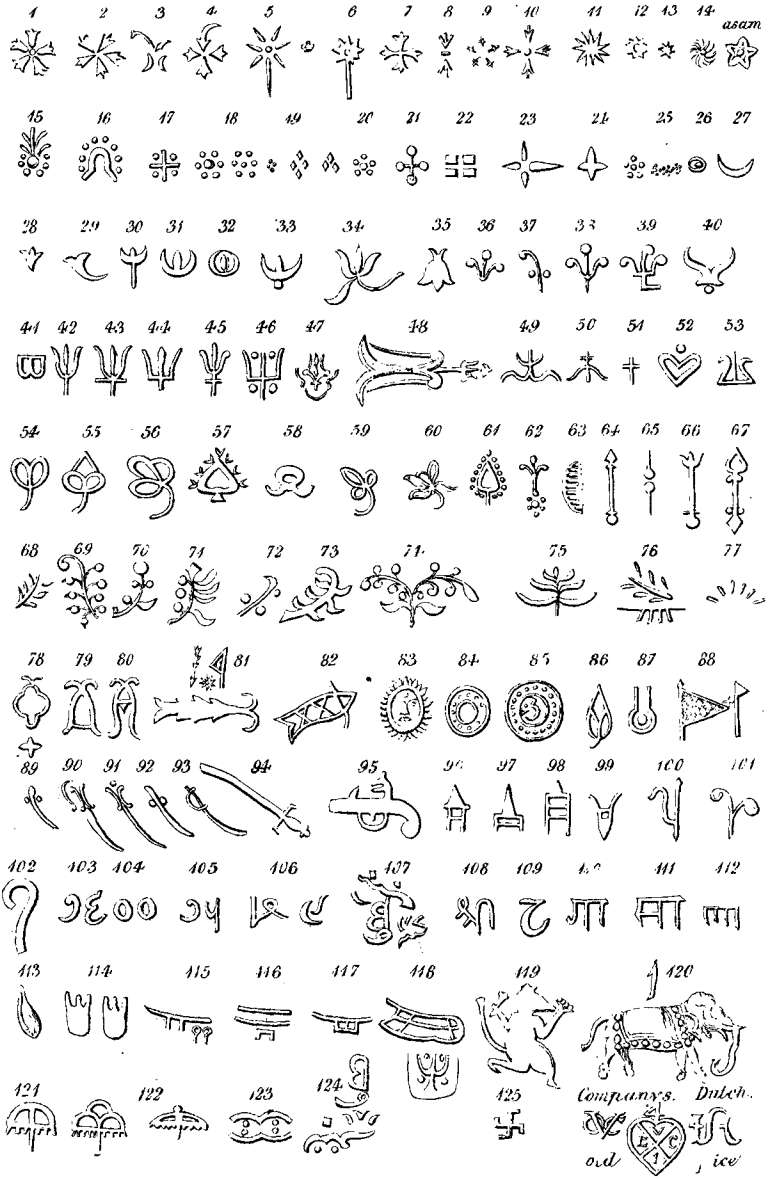
15. THE COMMON BHARTPÚR PAISÁ.

Shewing that the copper coins may be also recognised by their ap-

[1] The late Emperor of China, written 'Kea-king' in the Anglo-Chinese Kalendar, reigned from 1781 to 1821.

[2] I have since been informed that the symbol on the Nágpúr rupee is intended for ३½ the Maráthí numeral equivalent to $4\frac{1}{4}$.

# Symbols on Indian Coins.




after J. Prinsep.

West & Co. Imp.

Published by Stephen Austin, Hertford.

propriate emblems. The inscription will be seen to be part of the Muhammad Shâh legend.

16. MADRAS COPPER COIN.

Struck in England for circulation at Madras (see page 4). The same coat of arms will be found on the Bombay and Penang copper currency.

## CATALOGUE OF SYMBOLS ON MODERN INDIAN COINS.

(PLATE XLVI.)

[Taken from specimens in the Assay Office or in the author's possession. In some cases (marked ?), it is probable that the specimens have been misnamed from their being found current in other districts with different names.]

VARIETIES OF THE PHÚL, ('FLOWER') STAR, AND DOT.

1 Company's rupee. Gokula rupee?
2 Saronj rupee.
3 Islámábád muhr of Aurangzíb.
4 Vazírsáhí rupee, san 9. Bálásáhí?
5 Súrat & old Bombay (with a crown).
6 Korah (in Allahábád) with 21.
7 Srínagar, with 45. Ságar with 45.
8 Jhánsí. Also 10.
9 Saháranpúr: common.
10 Jhánsí: with 5 leaves, Gwáliár.
11 Ságar with 45. (*vide* plate xlv.)
12 Murshidábád.
13 Barellí, with 30.
14 Saháranpúr, with 9.14½ Old Assam.
15 Old Súrat muhr.
16 Jalwan or Jáláon?
17 Siwáí gold muhr, Aurangzíb. Nágpúr, with 94. Gokula, with 78.
18 Common: Ujjain, with 93 or 37. Udipúr.
19 Arkát. Chilkí Arkát, etc.
20 Private mark of Benáres mint (centre dot enlarged).
21 Kora or Corah, with 6.
22 Ujjain.
23 Old Farrukhábád rupee and muhr.
24 Bharatpúr. (see plate xlv.)
25 Chinawa rupee (Arkát).
26 Bhikanír, with 62, 63.
27 Maisúr, common; Chandausí.

VARIETIES OF THE PADAM, 'LOTUS' OR 'TREFOIL.'

28 Indor, old, with 29.
29 Ditto.
30 Barellí, with 13.
31 Madras, Sháhpúr, 'Alínagar.
32 New Madras.
33 Garnálí rupee (Arkát).
34 Chandur.
35 Gokula, or Gandasáhí paisá.
36 Kálpí.
37 Oujein new. Chanda: common.
38 Kálpí.
39 Patna? Muhr of Dihlí?
40 Bhartpúr paisá (see plate xlv.).
41 Old paisá found in Ságar.

VARIETIES OF THE TRISÚL, BALÁ, OR 'TRIDENT.'

42 Mathurá. Jáláon, Ságar.
43 Srínagar, with 7.
44 Old Ságar, Kálpí.
45 ,, Jáláon, etc.
46 Kálpí paisá, with 43, etc.
47 Nepál muhr. (see plate xlv.)
48 Bhopál, Bhilsá, Ráthgarh.
49 Telinga paisá?
50 Ganjam.
51 Old Dihlí and Farrukhábád: common. Nágpúr of Jeswant Ráo.
52 Nasír Sháhí, old Narbaddá paisá.
53 Sultán Muhammad, ,,

PHÚL, PADAM PHÚL, 'FLOWER, KNOT.'

54 Kotá rupee—and with 57.
55 Kotá rupee.
56 Bundí. Kotá.
57 New Kotá, with 56.
58 Hardá (Narbaddá).
59 Kotá variety. Bajranggarh.
60 Benares, old, small with 80.
61 Bhikanír, with 26, 62, 63.
62 ,, reverse.
63 ,, ,,

BARCHHÁ, 'SPEAR' OR 'SCEPTRE,' GUDÁ, OR 'MACE.'

64 Jodhpúr. Pálí.
65 Kochâman, with 92. Bopúsâhí.
66 Jodhpúr. Nágor.
67 Barellí? Urchá? Pálí.

JHÁR, THÚHAR; 'BRANCH OR SPRIG.'

68 Bhilárá.
69 Jaipúr-Siwái gold muhr.
70 Ajmír.
71 Chitor, Krishnâgarh.
72 Sálimsáhí? (Jaipúr).
73 Jaipúr rupee and muhr.
74 Bandarsela?
75 Mathurá. Jaipúr.
76 Chinsúr, with 100. Udipúr, Chitor old?
77 Barhânpúr?

VARIETIES OF THE ROHÚ, OR 'FISH.'

78 Gokula paisá.
79 Oudh, Lukhnow old rupee.
80 Ditto, Barellí. Old Benáres.
81 Machlísáhí of Lukhnow.
82 Benáres old.

SÚRAJ, 'THE SUN.'

83 New Indor rupee and muhr.
84 Indor.—Ujjain.
85 „ copper coin.
86 *Bel pattá*, Maheswar, with 87.
87 *Lingam*, Maheswarí rupee.
88 *Patáka*, 'flag or standard of Siva:' Sâgar rupee (pl. xlv.). Nágpúr.

VARIETIES OF THE 'SWORD:' SHAMSHÍRÍ.

89 Chanda, Gwáliár,—common.
90 Haidarábád, of Kâsim 'Alí.
91 „ Govind-bakhshí.
92 Common shamshírí.
93 Kochâman, with 64.
94 Nâgpúr, with 17. Katmandu (see p. 31). Balkh.
95 (Pistol) Agra paisá.

VARIETIES OF THE KAṬÁR, OR 'DAGGER.'

96 Akbar II. of Dihlí—small.
97 Narwar.
98 Bhartpúr. (see plate xlv.)
99 Siwái gold muhr of Muhammad Sháh, with 13: small.
100 The *Ankus* of Puna.—Chitor.

NUMERALS AND LETTERS.

101 (10) Hálí sikká of Puna, Nágpúr.
102 (9 or 1?) Rewá paisá. Bhilsá?
103 (76) Jabalpúr.
104 (55) Ságar.
105 (75) Indor old rupee.
106 *a* (4¼) Old Nâgpúr:
*b* (9) New do.[1]
107 Tehrí, Bandalkhand, illegible.
108 (श्री *srí*) Srísáhí rupee of Ajmír.
109 (ट *h*) Haidarí of Maisúr.
110 (गा *gá*,' cow') Chitor; from the proverb regarding the slaughter by Akbar: "*gáo mare ke páp.*"
111 (सा *sá*) Gold muhr, unknown?
112 (णा *ná*) Debased Dihlí gold muhr, san 29.

MISCELLANEOUS.

113 (shell) Bhâtgáon in Nepál.
114 (*Panja*, 'fists') Almorah.
115 Sálimsáhí, date 1199. (see plate xlv.)
116 „ Varieties.
117 „
118 Mewârí paisâ.
119 Kukuretí, near Pannâh in Bandalkhand (the god Hanumân?)
120 (elephant.) Nagar, Patan, Sopúr? Struck by Tipú?
121 (*Chhata*, 'the royal umbrella') on some of Muhammad Shâh and Shâh 'Alam's Dihlí coins.
122 Variety of „
123 Etáwa muhr.
124 Jhânsí.
125 The *swastika* emblem of the 7th Jina, found on some coins.

[1] The distinguishing symbol of the old Nágpúr rupee, struck at the Chanda and Hingan Ghát mints was as above, a Marâthí 4¼. When Bachâ Râo and Dr. Gordon had charge of the mint, their mark was a flag (88). The new Nâgpúrí since 1825 has the figure 9 above this flag. Other minor varieties are marked as follows:—the Yeswant Râo Nágpúrí, by +; the Man-Bhat-Sâhí, by =; the Ugno-Sâhí, by a Marâthí 10 (fig. 101); the Râmjí Tantia has a half moon ◡; the Narsingh Râo the same with a dot in the centre ◡; the Siva Râo, the same with a dot on one side ◡. There are many more, but they are not considered *chalan* or 'current.'

# NOTE ON THE HISTORY OF THE GOLD AND SILVER CURRENCIES OF INDIA.

[As the general subject of metallic currencies is just now attracting the serious attention of the European public, it may be useful that I should recapitulate briefly the facts to be gathered from the detached notices of the coins of the various kingdoms and diverse epochs illustrated in the preceding pages, which throw light upon the little known history of Indian mintages; and further, that I should complete the review by exhibiting the action of our own civilization on the circulating media of these later days, especially in reference to the important question of the institution and organization of the gold coinage as a legal tender, and its eventual supersession as such in 1836.

I have elsewhere expressed an opinion that the people of Hindústán, in very early times, had independently achieved considerable progress in the art of coining; even before Greek civilization reached them through the influence of Alexander's expedition, and the subsequent settlement in India proper of the Bactrian-Hellenes. Indeed, we are able to trace by the produce itself, each phase of mint development and each successive effort of invention tending to the production of a perfect coin. The earliest movement is seen in the fabrication of irregularly outlined flat pieces of silver or copper, of fixed weights, whose currency is marked by the symbols of consecutive dynasties, punched at hazard on their surfaces. Next, we remark a more careful rounding off of the metal, and the application of a single die over the whole of one surface, the other being left blank. As we proceed, we meet with complete coins; but these are cast in moulds, and may possibly indicate separate and independent progress. Successive modifications and improvements are observable in either class, which it is not necessary to follow more at large in this place: and, finally, we arrive at excellent specimens of an issue of fairly coined money, seemingly local in Northern Hindústán,[1] which there is good reason to assign to a period prior to the advent of the Greeks. Coins of these epochs have been found in silver, copper, bronze, and lead; the non-discovery of any examples in gold does not necessarily lead to the inference that the metal was not used for coining purposes; but merely amounts to the fact that, if used, it was of rare occurrence.

[1] Coins of the Behat type. Article X.

The Bactrian-Greeks, as far as their Indian provinces tell the tale, would appear to have restricted themselves to a currency of the two metals, silver and copper. Their successors, the Indo-Scythians again, discontinued the issue of a silver currency, and supplied its place by a gold coinage; increasing, simultaneously, the weight of the copper pieces. There is some uncertainty as to the dates of succeeding dynasties; but we find the Guptas,—who imitated the devices of the Indo-Scythian money,—in possession of a copious gold currency in their eastern provinces on the Ganges, aided by a limited silver, but sufficient copper medium of exchange; while their dominions towards the Western coast were supplied almost exclusively with a silver coinage based upon the mintages of the Sáh kings of Saurashtra (Gujarát); who in their own case had previously copied the style of the Greek hemi-drachmas of Apollodotus and other sovereigns. Here we must pass over centuries, and present our next tableau in the time of the Bráhman kings of Kábul and the Panjáb (about the 10th century A.D.). In this instance also the currency is confined to silver and copper. Mahmúd, and his successors of the Ghazní dynasty, employed gold in addition to the lower metals. At the period immediately preceding the Muhammadan occupation of India (A.H. 587, A.D. 1191) the northern provinces of Hindústán were furnished with a currency composed of a combination of silver and copper mixed in uncertain proportions: while the Rahtor monarchs of Kanauj still continued to issue gold. The former coins, which were entitled after the capital, Dilliwáls (دِلّیوال),[1] were adopted by the Pathán Sultáns of India, and a middle currency of such incorporated metals remained in use up to the time of Báber (A.H. 930, A.D. 1523-24). Simultaneously with the retention of this type of the local money, the Muhammadans introduced modified forms of dirhams and dínárs, of equal weights (174 grains). At what relative proportion these stood to each other we are left to conjecture, as history is silent on the subject, and the coins themselves afford us no means of instituting a comparison. The lower currency was completed by a copper coinage, which in some cases extended to so minute a division as 17.4 grains.

The celebrated Muhammad bin Tughlak (A.H. 725, A.D. 1324-5) introduced an infinite variety of new coins of all descriptions, and evidently remodelled the rates, together with the weights of his currency. The gold coinage was raised from 174 to 200 grains, and the silver reduced from the former amount to 140 grains. But his grand effort at finance seems to have been reserved for the production

[1] Inscription of A.H. 587 (A.D. 1191) on the Mosque of the Kutb at Dihlí; the original reads preferably Dilliál, but the Táj ul Máasir determines the word as دهلیوال.

of a scheme of a representative currency (founded on the Chinese paper credit system) in which copper and brass tokens were stamped with an authoritative impress of value, whether as the equivalent of gold or silver; and in addition, parallel representatives of the ordinary subdivisions of each, were issued to complete the currency. This attempt, after producing countless troubles, and resulting in utter failure—even under the guidance of an absolute and unscrupulous tyrant—was abandoned definitively before the expiration of three years from the first promulgation of the ordinance. I need not notice the minor incidents of Muhammad bin Tughlak's mint administration, further than to note a seeming reversion to the previous system of weights in the latter part of his reign. Nor need I more fully advert to the state of the currency under his successors, beyond remarking that Báber seems to have designed to substitute his Central Asian scheme of coinage in place of the then existing local distribution of the currency. However, when Shír Sháh had driven Humáyún out of India (A.H. 949, A.D. 1541) he entered upon a general reform of the coinage, which had the effect of introducing the now universal rupee, and abolishing the unsatisfactory compound of mixed metals; in addition to simplifying the lower coinage, by its reduction to a fixed and determined standard of pure copper,[1] representing the dám, which we must suppose had previously been minted in billon.[2]

At length we reach an epoch when we have no longer to depend upon the coins as our only data, but are able to cite written and contemporary authority for the illustration of our subject. Akbar's minister, Abú'lfazl, has preserved to us a full and complete record of his master's mint arrangements; from this we discover that the authoritative standard of the day was copper, based upon the dám, which is defined as "a copper coin, in weight 5 tanks, or 1 tolá, 8 máshas, and 7 ratís, in value the 40th part of a rupee." The text of the 'Ayín-i Akberí' goes on to declare the weight and value of the gold and silver coins, the equivalents of each being expressed in dáms, and their relative exchangeable value *inter se* being for the moment altogether ignored.[3] In this same measure of value all the revenues of the empire are estimated, indeed, it would appear from an incidental notice in connexion with the subject of relative values, that the definition of the worth of

[1] I have estimated this coin at 323.5 grains; pieces now in existence weigh as high as 322 grs. (See 'Numismatic Chronicle,' xv. 1852.)

[2] "The dám," says Abú'lfazl, "was formerly called pysah and also Bahloli."—Bahlol Lodi's mixed coinage contributes isolated specimens that might well represent the requisite value, as tested by present assays; but there is an absence of uniformity in the general results that forbids our recognising any specific class of higher or lower equivalents.

[3] Gladwin's 'Ayín-i Akberí,' i. p. 37.

gold by any silver estimate, was—like the rupee itself—a novelty.[1] The materials afforded by the text of the 'Ayín-i Akberí,' whether tested by the valuation in dáms, or by the equivalents subsequently given of the rupee correspondents of the several descriptions of muhrs, equally establish the result that gold stood to silver as 1 to 9.4. The rupees, it will be seen, were themselves of various standards, ranging from the 39 dáms of the old round rupee, to the 40 dáms of the square jaláli; and, in fact, it is acknowledged in one place that even the estimated rates were uncertain in their application, and that the silver coin was left to find its own level in the market.[2]

I now arrive at the period when British influence is felt upon the the currencies of India, and as this is a subject connected with which much misunderstanding and some misrepresentation have taken place, I secure myself from any possible prejudice or favor by permitting the Government to state its own case, in extracts from the legislative enactments promulgated from time to time. The history is unsatisfactory in its earlier portions, and incomplete towards its end, where, it is clear, much remains intentionally untold.

Regulation XXXV. of 1793.—Preamble.—"A Regulation for re-enacting, with amendments, the Rules passed on the 20th June, 24th October, and 31st November, 1792, and subsequent dates, for the reform of the Gold and Silver Coin in Bengal, Behar, and Orissa; and for prohibiting the currency of any Gold or Silver Coin in those provinces, but the 19th Sun Sicca Rupees and the 19th Sun Gold Mohurs."

"Sec. 1. . . . The sicca rupee of the 19th sun is the established silver coin of the country, and the rupee in which the public revenues are payable. It was with a view to render it the general measure of value, that Government determined in the year 1773, that all rupees coined in future should bear the impression of the 19th sun or year of the reign ofShah Alum. . . . "The rules by which the gold coin has been regulated have been productive of evils, similar to those which have prevailed with regard to the silver coin. Under the native administrations, and until the year 1766, the gold mohur was not considered as a legal tender of payment in any public or private transaction, nor was the number of rupees for which it was to pass

[1] When Azad-al-daulah "was sent to Kandes, Rájá Tudermull made the price of gold mohurs to be estimated in rupees:" i. p. 39. The original Persian text is somewhat obscure in this passage; and the MS. copies vary in the wording of the sentence; but Gladwin seems to have fathomed the real meaning.

[2] "Although the market price is sometimes more or less than 40 dáms, yet this value is always set upon it in comparative calculations."—Ayín-i Akberí, i. 35. The original passage is quoted in the body of note [2] p. 5, *suprâ*.

current ever fixed by the Government. It was struck for the convenience of individuals, and the value of it, in the markets, fluctuated like other commodities: silver being the metal which was the general measure of value throughout the country. In the year 1766, the value of the gold coin, with respect to the silver, was first fixed, and the former coin declared a legal tender of payment. A gold mohur was struck, and ordered to pass for fourteen sicca rupees. But as this coin (calculating according to the relative value of the two metals) was much below the worth of the silver, in the number of rupees for which it was ordered to pass, it was found impossible to render it current, and it was accordingly called in; and a new gold mohur, being that now current, was issued in 1769, which was directed to pass as a legal tender of payment for sixteen sicca rupees. The intrinsic worth of this coin was estimated to be equal to the nominal value of it, or as nearly so as was deemed necessary to render it current at the prescribed rate." [The Regulation then goes on to enumerate the difficulties attendant upon giving free currency to these coins,[1] and proceeds to say:] "The means which appear best calculated

[1] Sir James Steuart, in his work, entitled 'The Principles of Money applied to the present state of the Coin of Bengal' (A.D. 1772), gives us some interesting details as to the aim and object of the original establishment of the gold currency of Bengal, and the want of success that attended the measures of Government, confessed to in the above Regulation. He says: "It has been observed, that this coin, called gold mohurs, had been formerly coined at Dehli, of the same weight and fineness with the sicca rupee of Bengal and other countries of Hindostan; but that they passed conventionally, having no legal *denomination* . . In 1766, . . it was proposed, as an expedient for augmenting the currency of specie to make a coinage of gold, . . and the directors of this operation, pitching upon fifteen Arcot rupees as the value of one gold mohur, instead of estimating the value of these fifteen Arcot rupees by the fine metal contained in them, estimated them by their current value, which was above the proportion of their intrinsic worth. Not satisfied with this first deviation from principles, they added to the mohur (already over-rated in its proportion to the fifteen silver Arcot rupees) no less than 8 per cent. extra-denomination, entirely arbitrary. So when this gold currrncy came abroad, it proved to be no less than $17\frac{1}{2}$ per cent. worse in payments than silver rupees of Bengal, Madras, Bombay, and Surat," pp. 26, 27.

"The people of that country (Bengal) had been so long accustomed to silver coin, that they never would, except when forced to it, receive the mohurs in payment. So the Company was obliged to make a new regulatiou in 1769, little better than the former. At last the gold currency fell all together to many per cent. below its intrinsic value, according to the saying, *Dum vitant stulti, vitia in contraria currunt.*"

Sir J. Steuart, at p. 30 *et seq.*, gives us the weight and standard of these coins:—

The 1766 mohur was 20 carats fine, or 20-24ths: full weight, 179·66 grs., proportion of fine gold, 149·72 grains: issued as the equivalent of 14 rupees.

The rupee being 179·66 grs. in full weight, and containing 175·92 grs. of fine silver.

The mohur of 1769, full weight 190·773 grs., contained 190·086 grs. of fine gold: the value being fixed at 16 rupees: the silver currency remaining as before.

Our author continues: "Now if we go upon the supposition we have hitherto adopted, viz., that the proportion of the metals in India was supposed to be at 14 to 1; then in this coinage of 1769, the gold was over-rated nearly $5\frac{3}{4}$ per cent."

to render the gold mohur generally current, are to declare it receivable at all the public treasuries, and in all public payments throughout the provinces, at the rate of sixteen sicca rupees."

SEC. 2. defines weight and standards, or—

"Gold mohurs, 190·894 troy grs.: Assay, compared with English standard gold, better, 1 car. $3\frac{1}{4}$ grs.

"Sicca rupees, $179\frac{2}{3}$ grs.: Assay, compared with English standard silver, better, 13 dwts."

SEC. 3. specifies that these gold mohurs "are to be considered a legal tender of payment in all public and private transactions . . at the rate of sixteen sicca rupees;" and further defines penalties for their refusal by the native Treasurers; and to complete the authoritative currency, it is even declared in Sec. 20, that "no person shall recover in any court of judicature . . any sum of money, under a bond or other writing, or any agreement, written or verbal, entered into after the above-mentioned date, by which any sum of money shall be stipulated to be paid in any species of rupees, excepting sicca rupees or gold mohurs of the 19th sun, or the halves and quarters of each."

REG. VI. of 1794 postpones to 10th April, 1794, the operations of Secs. 18, 19, 20, and 23 "as regards the silver coin."

REG. LIX. of 1795 further postpones the operation of these Rules to 20th April, 1796.

REG. LXI. of 1795 refers merely to the amount of loss which is to be held to reduce these rupees below the standard.

REGS. I. of 1797, V. of 1801, and XXXVIII. of 1803 relate to exemption from duties of gold and silver coins.

REG. XLV. of 1803 gives effect to the arrangement for the mintage of Lucknow or Furrukkábád rupees, of the "same size and form as the 19th sun sicca rupees"; weight and standard to be hereafter determined.

SEC. 25 is, in effect, to the same tenor as Sec. 20 of Reg. XXXV. of 1793, except that gold mohurs are not alluded to; but Sec. 42 explains, that "whereas the gold coin, denominated gold mohurs, has never obtained an extensive circulation in the ceded provinces, in consequence of silver having been the general measure of value in those provinces, from time immemorial; and whereas, during the government of the Nawab Vizir, the value of the gold mohurs in circulation, with relation to the silver coin, was never fixed; and, whereas the coinage of gold mohurs has been long discontinued by the Native Government of the said provinces, as well as the adjacent foreign states; it is not, therefore, judged necessary, at present, to establish a gold coinage in the provinces in question. The gold

mohurs shall be permitted to be circulated in the ceded provinces as heretofore, according to the value which individuals receiving and paying the same shall determine; but, gold mohurs shall not be considered to be a legal tender of payment in any public or private transaction, nor shall they bear any fixed rate of value, compared with reference to the silver coin . . established by this Regulation."

SEC. 43 *et seq.* provides for the copper coinage.

REG. LIV. of 1803 postpones the operation of Sec. 20, Reg. XXXV. of 1793, to 16th August for the province of Chittagong.

REG. XII. of 1805, Sec. 13, declares that after a fixed date, "no money will be received in payment of the public revenue (in Cuttack), excepting Calcutta sicca rupees or gold mohurs of the 19th sun."

SEC. 15 extends the penal provisions of Sec. 20, Reg. XXXV. of 1793 to the same province.

REG. III. of 1806 specifies the weight and standard of the Lucknow sicca rupee, introduced by Reg. XLV. of 1803, viz.: 173 grs. troy. Touch, or parts of fine silver, in 100, 95·5; alloy, 4·5.

REG. IV. of 1807 refers to rupees alone, and determines the rates at which rupees of sorts shall be received and issued in the ceded provinces. Sec. 8 makes the same applicable to Cuttack.

REG. XIII. of 1807 rescinds the penalties named in Secs. 20 and 21, Reg. XXXV. of 1793, and in parallel sections applicable to local divisions of the country; it being admitted that in many cases, "the penalty of non-recovery by judicial process is not only a hardship to the individual, but is repugnant to the ends of justice."

REG. II. of 1812 defines duties on the coinage of bullion.

SECS. 10 and 11 specify the weight and value of the Benares rupee as 175 grs. troy. Touch, or pure silver, 168·875; alloy. 6·125.

REG. XVII. of 1817, Secs. 9, 10, and 11 prescribe punishments for counterfeiting, debasing, etc.

REG. XIV. of 1818.—The preamble states, "The high standards established for the gold mohur and sicca rupee, having been found productive of many inconveniences, both to individuals and the public, . . [but] as a reduction in the value of the sicca rupee, from its being in a great measure the money of account, both in private and public transactions, would necessarily change the terms of all existing contracts, and might be productive of embarrassment and trouble, it has been determined to leave the rupee unaltered in this respect; and the new Calcutta sicca rupee will consequently contain the same quantity of fine silver as that heretofore struck, and, being of the same intrinsic value, will circulate on the same terms. The mint proportions of silver and gold, being, it is believed, inaccurately estimated at present, and it being also desirable that an uniformity in this

respect should be introduced at the three Presidencies of Calcutta, Madras, and Bombay, it has been thought advisable to make a slight deduction in the intrinsic value of the gold mohur to be coined at this Presidency, in order to raise the value of fine gold to fine silver, from the present rates of 1 to 14·861 to that of 1 to 15. The gold mohur will still continue to pass current at the rate of sixteen rupees. For the purposes and objects above enumerated" it is enacted, etc.

SEC. 1, par. 2nd.—"The weight and standard of the Calcutta sicca rupee and gold mohur . . shall be as follows[1]" :—

Gold mohur ... weight 204·710 grs. ... fine gold 187·651 ... alloy 17·059
Sicca rupee ... weight 191·916 grs. ... fine silver 175·923 ... alloy 15·993

REG. V. of 1819 refers to mint and bullion details.

REG. XI. of 1819 discontinues the coinage of the Benares rupee, and limits "the legal currencies in the territories subordinate" to Bengal "to two, namely the Calcutta and Furruckabad rupee." The latter is specified at—Weight, 180·234 grs.; pure silver, 165·215; alloy, 15·019 = 11-12ths pure and 1-12th alloy.

SEC. 10 secures an equitable arrangement for bonds, etc., "not expressed in Furruckabad rupees."

REG. V. of 1821 regulates the rates at which Benares and Furruckabad rupees shall be received in payment of revenue.

[1] To exemplify how Governments keep their own laws, I extract from 'Allen's Indian Mail' of 1854, a statement of manifest authenticity regarding certain mint operations sanctioned during the continued currency of this Regulation:—"The market of Calcutta has invariably exhibited a great difference of price between the pure gold mohurs of old standard and those of the new one-twelfth alloy standard. For seven years—that is, from 1818 to 1825—the Calcutta mint coined nothing but new-standard gold mohurs; but in 1825-26, the Government having had a large receipt of gold from the Burmese, and having obtained also a considerable remittance of gold from Madras, consequent upon the substitution of rupees for pagodas in the currency of that presidency, this *Government gold was, for the sake of the profit, coined* into gold mohurs of the old standard,—Regulation XIV. of 1818 prescribing one-twelfth alloy for the Calcutta gold, notwithstanding. There were above four lacs of old gold pieces struck in the Mint, and sold at the general Treasury at the price of the day. But it was only in 1829 that a similar privilege was conceded to private bullion-merchants. The consequence, however, of conceding to them the privilege of obtaining coin of the old standard was, that in the six years from the date when it commenced to 1835, when the new Act took the privilege away, nearly as much private gold bullion was brought to be coined as in the eleven preceding years: and when the privilege was taken away, there was a very limited coinage of the new gold coin, and that coinage was principally of Government gold."—After the passing of the Act of 1835, the mint speculations would seem to have been less successful; at least, if we are to credit the following, which is affirmed under similar authority with the passages just quoted:—"The difference of price even of unstamped pure gold, as compared with stamped one-twelfth alloy coin was such, that the Mint Committee of Calcutta, in the year 1836, applied to Government, and obtained leave to sell the Government bullion in its possession instead of coining it. The calculation of profit was based on a comparison, not with the par fixed for receipts into the Government treasury (viz. fifteen of silver for one of gold), but with the price at which the same gold would sell as a coin; showing evidently that our stamp gave no additional value, but the contrary,"

Reg. II. of 1824 abolishes the mint at Furruckabad.

Reg. VII. of 1833 alters the weight of the new Furruckabad rupee, and assimilates it to the legal currency of the Madras and Bombay Presidencies, and adjusts the weight of Calcutta sicca rupees thus:—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Calcutta sicca rupee | ... | weight 192 grs. | ... | fine 176 | ... | alloy 16 |
| Furruckabad rupee | ... | weight 180 grs. | ... | fine 165 | ... | alloy 15 |

The tola or sicca weight 180 grs., introduced (as stated in detail at p. 7, *suprâ*).

Act XVII of 1835, Sec. 7 declares, "and be it enacted, that the under-mentioned gold coins only shall henceforth be coined at the mints within the territories of the East India Company:—

1st.—A gold mohur or fifteen rupee piece of the weight of 180 grs. troy, and of the following standard, viz.: 11-12ths, or 165 grs., of pure gold; 1-12th, or 15 grs. of alloy": with proportionate subdivisions.

Sec. 8 defines the devices these coins are to bear.

Sec. 9. "And be it enacted, that no gold coin shall henceforward be a legal tender of payment in any of the territories of the East India Company."[1] (Passed 17th August, 1835).

Act XXI. of 1835 defines the weight and value of the copper currency, in the Presidency of Bengal, as follows:—

"1.—Pice, weighing 100 grs. troy.

"2.—A double-pice, 200 grs. troy.

"3.—A pie, or 1-12th of an anna piece, $33\frac{1}{3}$ grs."

Sec. 2 enacts that "the said pice shall be a legal tender for 1-64th of the Company's rupee, and the said double-pice for 1-32d of the Company's rupee, and the said pie for 1-192d of the Company's rupee." (Passed 7th December, 1835).

Act XIII. of 1836 directs that the Calcutta sicca rupee shall cease to be a legal tender from the 1st January, 1838; but shall be received at public Treasuries by weight, subject to one pie for re-coinage: and further limits the circulation of certain local copper coins.

Act XXXI. of 1837 merely refers to devices.

Act XXI. of 1838 authorises the "coinage and issuing of any silver coins of a value represented in even annas, or sixteenths of the

[1] As there are no Preambles to the Acts, we are left to discover the reasons which led to this abrupt announcement. 'The Minutes of Consultation in Council' might perhaps disclose the guiding motive. In this instance, however, silence need not be taken for discreet reticence, for many good and valid reasons suggest themselves as warranting the course pursued. And in regard to the new aspect that the gold discoveries have since given to the comparative values of the precious metals, it is to be remembered that at the moment of the passing of this Act, gold stood relatively to silver at *over* 15 to 1 in the local markets.

Company's rupee," of the same standard as the higher denominations.

Act XXXI. of 1839 prescribes punishment "for drilling, defacing, or debasing current coin," etc.

Act XIII. of 1844 is an Act for the withdrawal from circulation of the Trisoolee pyce in the province of Benares.

Act XXII. of 1844 merely extends Act XXI. of 1835 to all "the territories of the East India Company."

Act VI. of 1847 refers to the copper currency of the Straits' Settlements.

To complete the series of Government documents, I append to the more formal legislative enactments, the substance of the notification of the 22nd of December, 1852; which, in its opening paragraph, likewise sufficiently explains the nature of the intermediate order of 1841.[1]

"No. 26. Fort William, Financial Department, 22nd December, 1852.—Notification.—By Sec. 9, Act XVII. of 1835 of the Government of India, it was enacted, that thenceforward no gold coin should be a legal tender of payment in any of the Territories of the East India Company; and, accordingly, gold ceased from the date of the passing of the Act to be a legal tender of payment in the Company's Territories in India."

"But, by a Proclamation issued on the 13th January, 1841, officers in charge of public treasuries were authorized freely to receive gold coins, struck in conformity with the provisions of the same Act XVII. of 1835, at the rates indicated by the denomination of the pieces, until they should have passed certain limits of lightness, set forth in a table published with the Proclamation, or until further orders; and gold coins have been thus received in liquidation of public demands up to the present date."

"Notice is now given . . that on and after that date [1st January, 1853,] no gold coin will be received on account of payments due, or in any way to be made to the Government[2] . .

[1] I have not failed to examine this Proclamation. It specifies the devices *(Reverse:* "A lion and a palm-tree") for the *new* gold coinage, "in conformity with Act XVII. of 1835"; and proceeds: "officers in charge of public treasuries are hereby authorized freely to receive these gold coins at the rates, until further orders, respectively denoted by the denomination of the pieces, until they shall have passed the limits of lightness allowed for wear, laid down in the annexed table, when they will only be receivable as bullion, and be subject to a deduction of one per cent. for seignorage."

[2] I do not ordinarily permit myself to criticise the acts of the Government of India; but these orders seem fairly to demand a passing notice. Viewing the peculiar element of suspicion of motives so strong in Asiatic minds, and the importance the natives of India attach to every varying phase of the dealings of their rulers, it is clear that the "Resolution" of 1852 was neither wise nor politic; it is doubtful whether, under the circumstances, it was just. The reservation of "until further orders," so clumsily inserted in the Proclamation of 1841, might convey its special meaning to the ear of an English lawyer, but it is not likely to

Gold will continue as heretofore, to be received into any of the mints . . for coinage, under the Act and Rules at present in force for the coinage of gold, but Mint certificates for gold coins will be discharged in gold only, and no such certificate for gold will be accepted in any public treasury in liquidation of public demands, or on account of any payment to the Government whatever."[1]

The Madras and Bombay Governments seem to have pertinaciously abstained from legislating on coinages and currencies, and their Statute Books are altogether silent on these subjects, until the action of the Supreme Government is brought to bear on them in 1835. Such being the case, I am unable to elucidate the measures of Mint progress in the minor Presidencies.

have borne its full significance to the intelligence of the Native banker: apart from this, it is clearly a question whether the tenor of the Proclamation itself did not imply an understood obligation on the part of Government, to receive back the gold coined and issued under its provisions, coupled as those provisions were with the inducements held out to aid the circulation, that the officers of Government were enjoined "freely to receive these gold coins at the rates" etc.; the only obvious restriction, beyond the formal "until further orders," being that the pieces should not have "passed the limits of lightness allowed for wear" etc.

[1] The same writer in 'Allen's Indian Mail,' 1854, who clearly has had access to official documents, thus elucidates the motive and object of the Order of 1852:—"We have explained the condition of the gold coin of India, and the erroneous principles adopted for its manufacture. Things continued in this state when the gold of California and Australia began to affect the market, and to change the relative value of that metal to silver. The first considerable increase in the import of gold at Calcutta was in the year 1848-49, and a large portion of it was sent to the mint, in that and the following years, for conversion into low-standard lion-device pieces, [XVII. of 1835]. The sending of gold to the mint at this period was in reality a mere sale of the metal to Government for silver, at the par rate of 15 to 1, which then began to prevail as the market rate. The Mint certificates, obtained for gold delivered, were immediately paid in at that par, in satisfaction of Government dues, or were negotiated at the banks, where silver was always claimed upon them under the option then given of receiving the amount in rupees at the par in question. The gold thus, when coined by the Mint, remained as a dead balance in the Government treasury, not being issuable at the par of 15 to 1, in the condition of base standard coin, to which it had been manufactured. Besides this process of gold accumulation through deliveries at the Calcutta Mint, low standard coin, previously issued, began also to be paid into the treasury, at the established par rate in ordinary transactions [under the Proclamation of 1841]; so that out of a total amount of lion-device gold mohurs, not exceeding in value seventy lacs of rupees, which was the value of the coinage up to that date, as before shown, more than fifty lacs were, in 1852, in deposit in the Government treasury as a dead unserviceable balance. It was at this time that the Government of India began to contemplate measures for converting its entire 5 per cent. Debt into Stocks at 4 per cent. The prospect, therefore, of having the balance to which the Government looked for the means of completing this operation rendered unserviceable for the purpose by the substitution of gold coin, not a legal tender, for the rupees claimable by the public creditors who might elect to receive payment in cash, was by no means agreeable. A prompt remedy was necessary, and the question being referred to the Court of Directors, the desire to adhere still to their old principles suggested that the low standard gold coin, not being a legal tender, the receipt of it by Government should be altogether stopped; and this was accordingly done in 1853, by public notice in the *Gazette* of Calcutta."

Having completed this summary review of the gold and silver coinages, I now revert to Prinsep's Tables.[1]—E.T.]

TABLE *of the Coinages issued from the Calcutta Mint from* 1801-2 *to* 1832-33.

| Official Year. | Government and Individuals. | | | | | | | | Total sikká rupees. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Gold. | | | | Silver. | | | | | | |
| | SA. R. | A. | P. | | SA. R. | A. | P. | | R. | A. | P. |
| 1801–2 | 83,139 | 12 | 0 | | 30,73,226 | 12 | 0 | | 31,56,366 | 8 | 0 |
| 1802–3 | 1,27,848 | 0 | 0 | | 46,64,736 | 8 | 0 | | 47,92,584 | 8 | 0 |
| 1803–4 | 89,496 | 8 | 0 | | 77,41,674 | 4 | 0 | | 78,31,170 | 12 | 0 |
| 1804–5 | 1,26,940 | 0 | 0 | | 1,00,78,060 | 12 | 0 | | 1,02,05,000 | 12 | 0 |
| 1805–6 | 1,30,454 | 0 | 0 | | 71,20,322 | 12 | 0 | | 72,50,776 | 12 | 0 |
| 1806–7 | 91,773 | 8 | 0 | | 1,63,14,198 | 12 | 0 | | 1,64,05,972 | 4 | 0 |
| 1807–8 | 2,31,752 | 4 | 0 | | 1,45,80,126 | 0 | 0 | | 1,48,11,878 | 4 | 0 |
| 1808–9 | 50,800 | 12 | 0 | | 1,11,30,380 | 4 | 0 | | 1,11,81,181 | 0 | 0 |
| 1809–10 | 31,885 | 8 | 0 | | 82,76,886 | 0 | 0 | | 83,08,771 | 8 | 0 |
| 1810–11 | 10,29,656 | 0 | 0 | | 1,65,81,865 | 0 | 2 | | 1,76,11,521 | 0 | 2 |
| 1811–12 | 18,54,703 | 9 | 4 | | 83,83,885 | 12 | 1 | | 1,02,38,589 | 5 | 5 |
| 1812–13 | 12,56,319 | 0 | 0 | | 78,51,046 | 10 | 0 | | 91,07,365 | 10 | 0 |
| 1813–14 | 10,91,853 | 12 | 8 | | 28,31,166 | 11 | 11 | | 39,23,020 | 8 | 7 |
| 1814–15 | 15,01,964 | 14 | 8 | | 71,29,817 | 15 | 1 | | 86,31,782 | 13 | 9 |
| 1815–16 | 9,35,987 | 4 | 0 | | 1,39,76,463 | 5 | 5 | | 1,49,12,450 | 9 | 5 |
| 1816–17 | 13,63,200 | 14 | 8 | | 2,21,48,114 | 5 | 6 | | 2,35,11,315 | 4 | 2 |
| 1817–18 | 15,67,279 | 9 | 4 | | 55,15,411 | 7 | 8 | | 70,82,691 | 1 | 0 |
| 1818–19 | 3,63,105 | 6 | 8 | | 1,66,40,247 | 2 | 7 | | 1,70,03,352 | 9 | 3 |
| 1819–20 | 5,37,670 | 9 | 4 | | 2,63,46,438 | 13 | 3 | | 2,68,84,109 | 6 | 7 |
| 1820–21 | 8,26,046 | 0 | 0 | | 1,08,36,215 | 6 | 11 | | 1,16,62,261 | 6 | 11 |
| 1821–22 | 4,26,331 | 13 | 4 | | 74,58,694 | 4 | 5 | | 78,85,026 | 1 | 9 |
| 1822–23 | 2,79,211 | 6 | 8 | | 68,52,391 | 7 | 8 | | 71,31,602 | 14 | 4 |
| 1823–24 | 1,26,509 | 0 | 0 | | 49,48,564 | 6 | 5 | | 50,75,073 | 6 | 5 |
| 1824–25 | 29,72,948 | 6 | 8 | | 69,66,557 | 2 | 3 | | 99,39,505 | 8 | 11 |
| 1825–26 | 33,65,020 | 5 | 4 | | 97,19,093 | 15 | 1 | | 1,30,44,114 | 4 | 5 |
| 1826–27 | 34,26,832 | 0 | 0 | | 80,97,615 | 0 | 0 | | 1,15,24,447 | 0 | 0 |
| 1827–28 | 4,79,616 | 0 | 0 | | 66,69,149 | 15 | 0 | | 71,48,765 | 15 | 0 |
| 1828–29 | 5,01,296 | 0 | 0 | | 57,00,840 | 2 | 11 | | 62,02,136 | 2 | 11 |
| 1829–30 | 10,24,032 | 0 | 0 | | 83,95,484 | 11 | 5 | | 94,19,516 | 11 | 5 |
| 1830–31 | 17,58,896 | 0 | 0 | | 38,13,496 | 7 | 8 | | 55,72,392 | 7 | 8 |
| 1831–32 | 18,39,392 | 0 | 0 | | 44,77,722 | 14 | 4 | | 63,17,114 | 14 | 4 |
| 1832–33 | 23,71,024 | 0 | 0 | | 76,90,479 | 15 | 8 | | 1,00,61,503 | 15 | 8 |
| | 3,18,62,986 | 4 | 8 | | 30,19,70,375 | 1 | 5 | | 33,38,33,361 | 6 | 1 |
| COPPER COINAGE. | | | | | | | | | | | |
| From 1801 to 1813 ... ..... | | | | | 10,99,170 | 5 | 6 | | | | |
| 1813 to 1825–26 ... | | | | | 5,87,785 | 6 | 6 | | | | |
| 1826–27 to 1832–33 ... | | | | | 16,11,461 | 1 | 5 | | | | |
| | | | | | | | | | 32,98,416 | 13 | 5 |
| Total sikká rupees..... | | | | | | | | | 33,71,31,778 | 3 | 6 |

[1] [I had designed, as I intimated in a note p. 41, to have omitted all the details of the working of the Indian Mints. However, as I have since found reason to believe that a general return of the currencies issued by the East India Company would possess an interest with European readers, I have determined to abbreviate the redundances of Prinsep's forms, and endeavoured to complete the several statements, as far as possible, from documents in the East India House, which have been most liberally placed at my disposition by Col. Sykes.]

TABLE *of Silver Coinage in the Provincial Mints.*

| | Benáres. | Farrukhábád. | Ságar. |
|---|---|---|---|
| From 1804-5 to 1832-3, incl. | 11,14,79,898 6 6 | 7,74,66,519 3 11 | 53,99,282 8 6 |
| Of which sum private bullion ... | 6,67,85,549 13 8 | 3,10,18,509 10 5 | 7,89,496 2 4 |
| Government ditto ..... | 4,46,94,348 8 10 | 4,64,48,009 9 6 | 46,09,786 6 2 |
| Value of copper coinage up to the same period. ..... | 13,90,140 0 0 | 75,594 12 3 | 2,83,388 0 0 |
| Total | 11,28,70,038 6 6 | 7,75,42,114 0 2 | 56,82,670 8 6 |

| | | |
|---|---|---|
| Coinage at the Calcutta Mint ..... | Sikká Rs. | 33,71,31,778 |
| Coinage at Benáres..... | ,, | 10,58,15,663 |
| Coinage at Farrukhábád ..... | ,, | 7,26,95,732 |
| Coinage at Ságar ..... | ,, | 53,27,503 |
| Total Coinage of the Bengal Presidency from 1801-33: | Sikká Rs. | 52,09,70,676 |

[It will be seen that the totals in the preceding Tables are given in sikká and in Farrukhábád rupees. Act XVII. of 1835 introduced the Company's rupee as the one uniform currency of all India; this coin is composed of 165 grains of silver and 15 of alloy, and stands the declared equivalent of the old Bombay, Madras, Farrukhábád, and Sonát rupees—being defined as corresponding in value to $\frac{5}{6}$ths of the superseded Calcutta sikká rupee. All Government accounts, subsequent to the date of the passing of this Act, are therefore made up in the new or standard Company's rupee.

TABLE *of the value of Gold and Silver Coined in the Mints of Calcutta, Madras, and Bombay in each year from* 1833-34 *to* 1854-55.

(From Official Returns at the India House.)

| | CALCUTTA. | | MADRAS. | | BOMBAY. | | TOTAL. | |
|---|---|---|---|---|---|---|---|---|
| | Gold. | Silver. | Gold. | Silver. | Gold. | Silver. | Gold. | Silver. |
| | Value in Co.'s Rs. | Value in Co.'s Rs. | Value in Co.'s Rs. | Value in Co.'s Rs. | Value in Co.'s Rs. | Value in Co.'s Rs. | Value in Co.'s Rs. | Value in Co.'s Rs. |
| 1833-34 | 26,48,593 | 1,23,47,561 | 39,58,800 | 43,11,500 | ... | 10,83,156 | 66,07,393 | 1,77,42,217 |
| 1834-35 | 16,84,838 | 1,33,10,055 | 28,75,200 | 35,21,000 | ... | 50,75,286 | 45,60,038 | 2,19,06,341 |
| 1835-36 | 11,97,344 | 1,62,49,960 | | | ... | 64,34,764 | 11,97,344 | 2,26,84,724 |
| 1836-37 | 68,145 | 2,98,14,302 | The operations of the Mint were suspended from 1835 to 1841. | | ... | 82,71,877 | 68,145 | 3,80,86,179 |
| 1837-38 | 2,54,265 | 2,09,34,103 | | | ... | 1,09,48,636 | 2,54,265 | 3,18,82,739 |
| 1838-39 | 3,44,706 | 2,67,63,743 | | | ... | 1,17,72,822 | 3,44,706 | 3,85,36,565 |
| 1839-40 | 7,91,557 | 2,15,77,576 | | | ... | 98,28,901 | 7,91,557 | 3,14,06,477 |
| 1840-41 | 5,67,720 | 1,64,10,686 | | | ... | 1,20,38,236 | 5,67,720 | 2,84,48,922 |
| 1841-42 | 2,31,015 | 2,51,26,312 | ..... | 25,85,978 | ... | 51,75,329 | 2,31,015 | 3,28,87,619 |
| 1842-43 | ..... | 2,06,11,864 | ..... | 16,40,203 | ... | 1,07,95,668 | ..... | 3,30,47,735 |
| 1843-44 | 1,66,335 | 2,17,66,075 | ..... | 42,28,459 | ... | 2,07,32,497 | 1,66,335 | 4,67,27,031 |
| 1844-45 | 1,79,760 | 2,83,35,602 | 83,595 | 21,72,430 | ... | 1,54,60,180 | 2,63,355 | 4,69,68,212 |
| 1845-46 | 1,54 535 | 2,25,32,332 | 1,00,545 | 22,32,281 | 36,390 | 1,36,60,807 | 2,91,470 | 3,84,25.420 |
| 1846-47 | 4,27,335 | 1,64,78.122 | ..... | 60,84,016 | ... | 66,46,956 | 4,27,335 | 2,92,09,094 |
| 1847-48 | 1,62,930 | 1,01,19,938 | 3,00,000 | 34,95.301 | ... | 42,07,359 | 4,62,930 | 1,78,22,598 |
| 1848 49 | 7.04,700 | 1,33,03,269 | ..... | 12,95,676 | ... | 1,11,92.701 | 7.04,700 | 2,57,92.646 |
| 1849-50 | 3,24,525 | 1,35,97,117 | ..... | 8,64,372 | 15,300 | 96.50,554 | 3,39,825 | 2,41,12,043 |
| 1850-51 | 12,17,820 | 1,21,31,097 | ..... | 19,54.271 | 19,350 | 1,20,78,906 | 12,37,170 | 2,61,64,274 |
| 1851-52 | 6,25,500 | 1,78,80,191 | ..... | 36,27,082 | ... | 2,08,97,949 | 6,25,500 | 4,24,05,222 |
| 1852-53 | ..... | 2,73,66,206 | ..... | 39,35,171 | ... | 2,37,98,471 | ..... | 5,50,99,848 |
| 1853-54 | 14,56,785 | 2,31,82,702 | ..... | 67,50,846 | ... | 2,26,00,817 | 14,56,785 | 5,25,34,365 |
| 1854-55 | 26,760 | 70,43,170 | ..... | 28,68,429 | ... | 37,47,416 | 26,760 | 1,36,59,015 |
| | 1,32,35,168 | 41,68,81,983 | 73,18,140 | 5,25,68,015 | 71,040 | 24,60,99,288 | 2,06,24,348 | 71,55,49,286 |

TABLE *of Imports and Exports of Treasure (Gold and Silver) in each of the Presidencies of India, from* 1813-14 *to* 1853-54, *at* 2*s. the Rupee.*

| YEAR. | BENGAL. | | | | MADRAS. | | | | BOMBAY. | | | TOTAL. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Imports. | Exports. | Net Imports. | Net Exp. | Imports. | Exports. | Net Imp. | Net Exp. | Imports. | Exports. | Net Imports. | Imports. | Exports. | Net Imports. | Net Exp. |
| | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| 1813-14 | 584,403 | 4,275 | 580,128 | ..... | 142,143 | 30,756 | 111,387 | ..... | 207,822 | 181,043 | 26,779 | 934,368 | 216,074 | 718,294 | ..... |
| 1814-15 | 1,068,644 | 15,462 | 1,053,182 | ..... | 100,897 | 10,064 | 90,833 | ..... | 297,170 | 65,168 | 232,002 | 1,466,711 | 90,694 | 1,376,017 | ..... |
| 1815-16 | 1,803,407 | 1,575 | 1,801,832 | ..... | 111,701 | 10,755 | 100,946 | ..... | 604,788 | 7,743 | 597,045 | 2,519,896 | 20,073 | 2,499,823 | ..... |
| 1816-17 | 3,185,198 | 16,900 | 3,168,298 | ..... | 174,227 | 24,416 | 149,811 | ..... | 801,274 | 4,216 | 597,058 | 4,160,699 | 45,532 | 4,115,167 | ..... |
| 1817-18 | 3,202,702 | 31,725 | 3,170,977 | ..... | 172,842 | 4,577 | 168,265 | ..... | 1,166,685 | 26,417 | 1,140,268 | 4,542,229 | 62,719 | 4,479,510 | ..... |
| 1818-19 | 4,719,249 | 27,953 | 4,691,296 | ..... | 237,956 | 9,808 | 228,158 | ..... | 1,831,409 | 5,763 | 1,825,646 | 6,788,627 | 53,524 | 6,755,103 | ..... |
| 1819-20 | 4,054,602 | 309,892 | 3,754,710 | ..... | 180,595 | 18,928 | 168,667 | ..... | 705,903 | 61,639 | 644,264 | 4,951,100 | 390,459 | 4,560,641 | ..... |
| 1820-21 | 2,361,724 | 113,936 | 2,247,788 | ..... | 239,246 | 1,425 | 237,821 | ..... | 670,231 | 46,624 | 623,607 | 3,271,201 | 161,985 | 3,109,216 | ..... |
| 1821-22 | 2,145,453 | 1,239,639 | 905,814 | ..... | 253,499 | 16,989 | 236,510 | ..... | 520,276 | 46,799 | 473,477 | 2,919,228 | 1,303,427 | 1,615,801 | ..... |
| 1822-23 | 1,706 845 | 1,594 | 1,705,251 | ..... | 312,173 | 15,286 | 296,887 | ..... | 560,593 | 39,014 | 521,579 | 2,579,611 | 55,894 | 2,523,717 | ..... |
| 1823-24 | 1,299,542 | 756,582 | 542,960 | ..... | 123,989 | 70,229 | 53,760 | ..... | 697,940 | 156,652 | 541,288 | 2,121,471 | 983,465 | 1,138,006 | ..... |
| 1824-25 | 940,224 | 160,949 | 779,275 | ..... | 430,155 | 217,681 | 212,474 | ..... | 715,703 | 65,235 | 650,468 | 2,086,082 | 443,865 | 1,642,217 | ..... |
| 1825-26 | 1,040,997 | 13,870 | 1,027,127 | ..... | 224,735 | 505,000 | ..... | 280,265 | 1,132,878 | 13,597 | 1,119,281 | 2,398,610 | 542,467 | 1,856,143 | ..... |
| 1826-27 | 1,228,832 | 111,503 | 1,117,329 | ..... | 283,162 | 70,223 | 212,939 | ..... | 964,594 | 26,619 | 937,975 | 2,476,588 | 208,345 | 2,268,243 | ..... |
| 1827-28 | 1,413,958 | 448,098 | 965,860 | ..... | 251,868 | 391,381 | ..... | 139,513 | 1,250,190 | 70,327 | 1,179,863 | 2,916,016 | 909,806 | 2,006,210 | ..... |
| 1828-29 | 655,852 | 176,319 | 479,533 | ..... | 147,889 | 110,308 | 37,581 | ..... | 1,270,492 | 200,094 | 1,070,398 | 2,074,233 | 486,721 | 1,587,512 | ..... |
| 1829-30 | 981,025 | 164,032 | 816,993 | ..... | 109,305 | 540,123 | ..... | 430,818 | 1,102,200 | 229,746 | 872,454 | 2,192,530 | 933,901 | 1,258,629 | ..... |
| 1830-31 | 601,214 | 330,503 | 270,711 | ..... | 113,735 | 112,776 | 979 | ..... | 1,015,312 | 161,938 | 853,374 | 1,730,281 | 605,217 | 1,125,064 | ..... |
| 1831-32 | 354,483 | 1,144,547 | ..... | 790,064 | 92,185 | 389,983 | ..... | 297,801 | 735,586 | 203,514 | 532,072 | 1,182,254 | 1,738,047 | ..... | 555,793 |
| 1832-33 | 517,108 | 783,353 | ... .. | 266,245 | 134,637 | 301,468 | ... .. | 166,831 | 494,961 | 185,827 | 309,134 | 1,146,706 | 1,270,648 | ..... | 123,942 |
| 1833-34 | 568,176 | 247,552 | 320,924 | ..... | 114,527 | 201,385 | ..... | 86,858 | 1,193,438 | 115,348 | 1,078,090 | 1,876,441 | 564,285 | 1,312,156 | ..... |
| 1834-35 | 646,224 | 66,554 | 579,670 | ..... | 153,415 | 106,377 | 46,738 | ..... | 1,093,683 | 21,808 | 1,071,875 | 1,893,022 | 194,739 | 1,698,283 | ..... |
| 1835-36 | 687,168 | 56,599 | 630,569 | ..... | 112,760 | 31,528 | 81,232 | ..... | 1,346,536 | 19,981 | 1,326,555 | 2,146,464 | 108,108 | 2,038,356 | ..... |
| 1836-37 | 612,527 | 161,316 | 451,211 | ..... | 75,958 | 72,615 | 3,343 | ..... | 1,347,681 | 30,001 | 1,317,680 | 2,036,166 | 263,933 | 1,772,233 | ..... |
| 1837-38 | 1,048,883 | 140,433 | 908,450 | ..... | 128,542 | 106,431 | 22,111 | ..... | 1,462,675 | 93,790 | 1,368,885 | 2,640,100 | 340,654 | 2,299,446 | ..... |
| 1838-39 | 1,219,031 | 162,760 | 1,056,271 | ..... | 131,134 | 91,237 | 39,897 | ..... | 1,660,754 | 93,908 | 1,566,845 | 3,010,919 | 347,906 | 2,663,013 | ..... |
| 1839-40 | 1,226,786 | 200,017 | 1,026,769 | ..... | 112,406 | 127,446 | ..... | 15,040 | 606,071 | 143,059 | 463,012 | 1,945,263 | 470,522 | 1,474,741 | ..... |
| 1840-41 | 918,807 | 146,206 | 772,601 | ..... | 68,146 | 89,300 | ..... | 21,154 | 799,298 | 130,979 | 668,319 | 1,786,251 | 366,485 | 1,419,766 | ..... |
| 1841-42 | 989,617 | 159,155 | 830,462 | ..... | 67,560 | 180,481 | ..... | 112,921 | 784,156 | 175,438 | 608,718 | 1,841,333 | 515,074 | 1,326,259 | ..... |
| 1842-43 | 1,648,711 | 72,934 | 1,575,777 | ..... | 79,413 | 25,317 | 54,096 | ..... | 1,715,166 | 117,545 | 1,597,621 | 3,443,290 | 215,796 | 3,227,494 | ..... |
| 1843-44 | 1,752,376 | 185,794 | 1,566,582 | .. .. | 115,240 | 21,600 | 93,640 | ..... | 2,927,060 | 538,681 | 2,388,379 | 4,794,676 | 746,075 | 4,048,601 | ..... |
| 1844-45 | 1,581,365 | 396,543 | 1,184,822 | ..... | 188,561 | 65,053 | 123,508 | ..... | 1,982,545 | 645,243 | 1,337,302 | 3,752,471 | 1,106,839 | 2,645,632 | ..... |
| 1845-46 | 991,005 | 287,079 | 703,926 | ..... | 172,297 | 65,764 | 106,533 | ..... | 1,332,655 | 463,184 | 869,471 | 2,495,957 | 816,027 | 1,679,930 | .. .. |
| 1846-47 | 1,336,228 | 285,404 | 1,050,824 | ..... | 147,199 | 68,169 | 79,030 | ..... | 1,456,494 | 360,295 | 1,096,199 | 2,939,921 | 713,868 | 2,226,053 | ..... |
| 1847-48 | 747,223 | 905,071 | ..... | 157,848 | 132,153 | 214,262 | ..... | 82,109 | 1,094,014 | 306,704 | 787,310 | 1,973,390 | 1,426,037 | 547,353 | ..... |
| 1848-49 | 1,414,609 | 780,878 | 633,731 | ..... | 117,199 | 733,848 | ..... | 616,649 | 2,672,695 | 1,025,015 | 1,647,680 | 4,204,503 | 2,539,741 | 1,664,762 | ..... |
| 1849-50 | 1,214,865 | 354,205 | 860,660 | ..... | 121,437 | 72,637 | 48,800 | ..... | 2,060,505 | 544,400 | 1,516,105 | 3,396,807 | 971,242 | 2,425,565 | ..... |
| 1850-51 | 1,189,484 | 276,329 | 913,155 | ..... | 260,110 | 104,140 | 155,970 | ..... | 2,362,214 | 160,818 | 2,201,396 | 3,811,808 | 541,287 | 3,270,521 | ..... |
| 1851-52 | 2,306,470 | 250,588 | 2,055,882 | ..... | 297,398 | 215,768 | 81,630 | ..... | 2,448,190 | 452,732 | 1,995,458 | 5,052,058 | 919,088 | 4,132,970 | ..... |
| 1852-53 | 3,393,987 | 476,375 | 2,917,612 | ..... | 576,854 | 36,382 | 540,472 | ..... | 2,860,536 | 542,472 | 2,318,064 | 6,831,377 | 1,055,229 | 5,776,148 | ..... |
| 1853 54 | 2,085,985 | 437,912 | 1,648,073 | ..... | 577,490 | 115,657 | 461,833 | ..... | 2,208,479 | 929,726 | 1,278,753 | 4,871,954 | 1,483,295 | 3,388,659 | ..... |

The figures entered in the preceding Official Return, so far as they relate to the commerce of Bengal from 1813-14 to 1832-33, will be found to differ from those originally published by Prinsep. It may be necessary to explain, that his Tables exhibited the imports and exports of the isolated Presidency of Bengal, and, as such, comprehended not only the trade with the United Kingdom and foreign countries, but likewise the traffic of the Port of Calcutta, etc., with the coast and the other Presidencies. In the present return, the local port to port trade is properly excluded.[1]

It will be seen that the foregoing Table does not discriminate the relative amount of gold and silver imported or exported in each year, nor do the official documents at command admit of the separation of the two items earlier than 1846-47; subsequent to which, the proportion runs as follows, for the three Presidencies:—

| | GOLD. | | | SILVER. | | |
|---|---|---|---|---|---|---|
| | Imports. | Exports. | Remains. | Imports. | Exports. | Remains. |
| | £ | £ | £ | £ | £ | £ |
| 1846-47 | 851,738 | 2,890 | + 848,848 | 2,088,183 | 710,978 | +1,377,205 |
| 1847-48 | 1,048,778 | 9,661 | + 1,039,117 | 924,612 | 1,416,376 | − 491,764 |
| 1848-49 | 1,401,748 | 52,829 | + 1,348,919 | 2,802,755 | 2,486,913 | + 315,842[2] |
| 1849-50 | 1,160,661 | 64,868 | + 1,095,793 | 2,236,146 | 906,374 | +1,329,772 |
| 1850-51 | 1,155,310 | 2,016 | + 1,153,294 | 2,656,498 | 539,273 | +2,117,225 |
| 1851-52 | 1,338,778 | 71,165 | + 1,267,613 | 3,713,280 | 847,923 | +2,865,357 |
| 1852-53 | 1,335,164 | 168,805 | + 1,166,359 | 5,496,214 | 886,424 | +4,609,790 |
| 1853-54 | 1,101,136 | 17,265 | + 1,083,871 | 3,770,821 | 1,466,030 | +2,304,791 |
| | 9,393,313 | 389,499 | 9,003,814 | 23,688,509 | 9,260,291 | 14,428,218 |

The proportions of each metal absorbed by the several divisions of

[1] [The delay that has occurred in the printing of this sheet enables me to add parallel returns for the year 1854-55. The Madras and Bombay totals hereunto subjoined are derived from official sources; the Bengal return is taken from Bonnaud's 'Commercial Annual,' as the formal statements relating to that Presidency have not yet been received at the India House:—

| | IMPORTS. | EXPORTS. | NET IMPORTS AND EXPORTS. | |
|---|---|---|---|---|
| | | | Net Imports. | Net Exports. |
| | £ | £ | £ | £ |
| Bengal..... | 603,154 | 1,072,194 | ..... | 469,040 |
| Madras ..... | 194,221 | 521,814 | ..... | 327,593 |
| Bombay ..... | 1,188,913 | 353,654 | 835,259 | ..... |
| Total ..... | 1,986,288 | 1,947,662 | 38,626 | ..... |

[2] [The unimportant discrepancies that may be detected between the lower figures of these totals and those entered at the end of the Table in page 82 and elsewhere, are explained to have arisen from the varying results of working in gross and in detail, and the exclusion of fractions of rupees and the rejection of unit figures, to convert the rupee into sterling money at different stages of the arithmetical process.]

the Indian empire, during the eight years in question, are embodied in the annexed table:—

| Remains. | Calcutta. | | Madras. | | Bombay. | |
|---|---|---|---|---|---|---|
| | Gold. | Silver. | Gold. | Silver. | Gold. | Silver. |
| | £ | £ | £ | £ | £ | £ |
| 1846-47 | 215,530 | + 835,294 | 27,561 | + 51,469 | 605,757 | 490,442 |
| 1847-48 | 362,554 | — 520,402 | 48,558 | — 130,667 | 628,005 | 159,305 |
| 1848-49 | 415,947 | + 216,097 | 33,173 | — 649,826 | 899,799 | 749,571 |
| 1849-50 | 275,543 | + 585,117 | 55,091 | — 6,291 | 765,159 | 750,946 |
| 1850-51 | 317,998 | + 595,154 | 32,868 | + 123,097 | 802,428 | 1,398,974 |
| 1851-52 | 401,243 | + 1,654,639 | 76,069 | + 5,561 | 790,301 | 1,205,157 |
| 1852-53 | 575,351 | + 2,342,261 | 49,121 | + 491,353 | 541,887 | 1,776,176 |
| 1853-54 | 481,756 | + 1,166,317 | 86,719 | + 375,115 | 515,396 | 763,359 |
| £ | 3,045,922 | + 6,874,477 | 409,160 | + 259,811 | 5,548,732 | 7,293,930 |

In appropriate supplement to these Tables, and to enable my readers to judge of the comparative importance of the bullion traffic with India, I annex a statement from Col. Sykes' paper 'On the External Commerce of British India,' published in the 'Journal of the Statistical Society,' for June, 1856, and further brought up to the present date, which exhibits the relative values of goods and bullion imported and exported during the six years from 1849-50 to 1854-55.

*Abstract of Imports and Exports of Goods and Bullion from* 1849-50 *to* 1854-55.[1]

| Years ended 30th April. | Total amount of Goods imported into the three Presidencies. | Total amount of Goods imported into the three Presidencies. | Excess of Goods exported. | Net import of Bullion. | Excess of Exports of Goods, deducting Net Import of Bullion. | Bills drawn upon India by the Directors. | Final Balances of Trade in favor of India adjusted by other means. |
|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ |
| 1849-50 | 10,300,000 | 17,312,000 | 7,012,000 | 2,425,000 | 4,587,000 | 2,936,000 | 1,651,000 |
| 1850-51 | 11,559,000 | 18,164,000 | 6,605,000 | 3,270,000 | 3,335,000 | 3,236,000 | 99,000 |
| 1851-52 | 12,240,000 | 19,879,000 | 7,639,000 | 4,133,000 | 3,506,000 | 2,777,000 | 729,000 |
| 1852-53 | 10,071,000 | 20,465,000 | 10,394,000 | 5,776,000 | 4,618,000 | 3,317,000 | 1,301,000 |
| 1853-54 | 11,122,000 | 19,295,000 | 8,173,000 | 3,389,000 | 4,748,000 | 3,850,000 | 934,000 |
| 1854-55 | 12,442,000 | 18,298,000 | 5,856,000 | 38,000 | 5,818,000 | 3,669,000 | 2,149,000 |
| Total... | 67,734,000 | 113,413,000 | 45,679,000 | 19,031,000 | 26,648,000 | 19,785,000 | 6,863,000 |
| Average | 11,289,000 | 18,902,000 | 7,613,000 | 3,171,000 | 4,441,000 | 3,297,000 | 1,143,000 |

The Bengal return for the year 1854-55 is taken from Bonnaud's 'Commercial Annual,' as the official papers have not yet been received from that Presidency.

As the statements in the above Table are understood to have been

[1] [Mr. Low's Circulars furnish us with the actual shipments of treasure for India

prepared from official Custom-House returns, they may be accepted as *pro-tanto* authentic; and as the Government of the East India Company adhere to the highly primitive system of levying duties upon exports, the totals thus obtained are probably as trustworthy as the corresponding entries of imports.

As intimately connected with the subject of the demand for silver bullion in India, I also append a full return of the responsibilities undertaken by the East India Company on account of railways in course of construction. I have not been able to obtain exact statements of the several amounts actually expended in India—comprising the sums repaid by the Government in silver coin in return for the gold deposited in the treasury in Leadenhall Street—but the difference between the totals "paid in" and "re-issued in England" will furnish an approximate estimate of what the liability amounts to.

by the Peninsular and Oriental Company's vessels, during the years 1855, 1856, and 1857, amounting to the subjoined totals:—

1855.

| | United Kingdom,[a] (January to December). | | | Other Ports (11 months). | |
|---|---|---|---|---|---|
| Calcutta | Gold | £ 350 | Silver | £ 2,299,235 | Silver £ 603,141 |
| Madras | ,, | 17,789 | ,, | 177,173 | ,, 289,014 |
| Bombay | ,, | 1,232 | ,, | 2,267,400 | ,, 51,344 |
| | | £ 19,371 | | £ 4,743,808 | £ 943,499 |

The grand total shipped for the East in 1855 was—From the United Kingdom: Gold, £948,272; Silver, £6,409,889. Other Ports: Gold, £243,239; Silver, £1,524,240.

1856.

| | United Kingdom. | | | Other Ports. (including Dec., 1855). | |
|---|---|---|---|---|---|
| Calcutta | Gold | £ 719 | Silver | £ 3,417,091 | Silver £ 433,303 |
| Madras | ,, | 28,523 | ,, | 213,781 | ,, 327,494 |
| Bombay | ,, | 7,906 | ,, | 4,748,631 | ,, 163,216 |
| | | £ 37,148 | | £ 8,379,503 | £ 924,013 |

Total exports for the East from the United Kingdom for 1856: Gold, £404,749; Silver, £12,118,985. Other Ports: Gold, £74,039; Silver, £1,989,916.

1857.

| | United Kingdom. | | | Other Ports. | |
|---|---|---|---|---|---|
| Calcutta | Gold, £ 36,040 | Silver, | £ 5,689,015 | Gold, £30,896 | Silver, £ 893,407 |
| Madras | ,, 97,788 | ,, | 403,646 | ,, 15,300 | ,, 460,710 |
| Bombay | ,, 30,565 | ,, | 5,275,950 | ,, 16,161 | ,, 523,956 |
| | £ 164,393 | | £ 11,368,611 | £ 62,357 | £ 1,888,073 |

Total exports for the East from the United Kingdom: Gold, £269,275; Silver, £16,795,232. Other Ports: Gold, £259,986; Silver, £3,350, 689.

[a] [There were no shipments for either of the three Presidencies in January, and only £68,871 for Bombay in February, 1855.]

It may be necessary to add that the payments into the Company's Treasury on account of Railways commenced in 1848-49, and that the rate of exchange for Indian subscribers was permanently fixed at 1*s.* 10*d.* per Company's rupee.[1]

TABLE *exhibiting the sums paid into the East India Company's Treasury, in London, on account of Railways in India, up to* 30*th Sept.*, 1856.

| Names of Companies. | Capital sanctioned. | Total paid in. | Re-issued in England. |
|---|---|---|---|
| | £ | £ | £ |
| East Indian | 10,731,000 | 6,219,733 | 3,094,126 |
| Great Indian Peninsula | 4,000,000 | 2,525,113 | 866,263 |
| Madras | 4,000,000 | 1,926,354 | 1,027,805 |
| Sind | 500,000 | 265,614 | 92,480 |
| Bombay and Baroda | 500,000 | 334,511 | 58,891 |
| | 19,731,000 | 11,271,325 | 5,139,565 [a] |

[a] Of this total the sum of £ 869,301 has been disbursed as Interest on Capital.

Another important item bearing upon these details still remains to be noticed—that of the comparative value of the uncurrent silver coin received into the mint, as contrasted with the amount of bullion

[1] [The rate of exchange thus permanently established, irrespective of intrinsic value or any possible scheme of commercial par, has necessarily had the effect of insuring that nearly all the funds required for railways should be raised in England to the exclusion of Indian subscribers. The second Table at page 14 will indicate the intrinsic value of the Company's rupee, and its details will exemplify how the exchangeable value of that coin is liable to be affected by external influences; but, under ordinary circumstances, the par value may be fairly taken at 2*s.*; now, under this permanent and immutable arrangement, whatever the commercial rate of exchange might chance to rule at, Indian contributors to their own local railways had to pay 218 Company's rupees for every £20 share, or about 9 per cent. more than the nominal value of the stock, while under favorable rates of exchange, such as we have experienced of late, by remitting the money to England, the £20 share could be purchased for about 184 Company's rupees, making a total difference of no less than 17 per cent! In a similar degree have our Eastern speculators reason to complain of the comparative rates of interest; for while the Home Government was undertaking these millions of railway debts, and guaranteeing a *minimum* rate of profit at 5, and never less than 4½ per cent., the Government of India was endeavouring to persuade its obedient subjects that 4, and even 3½ per cent. (28th October, 1853) was quite as much as their money was worth; and the latter rate was not to form an ascending minimum like the railway guarantee, but a maximum, liable, on the contrary, to reduction at any favorable moment, after the manner of the extinguishment of the 5 per cents. in 1853 and their conversion into *fours*, the consentient holders of which were startled by the opening of a new loan at the former rate, in less than fourteen months after the completion of this—to use the words of the Governor-General—"not the less successful" operation. To sum up these contrasts, it is necessary to bear in mind the relative value of money in the two countries; which may be justly tested by the index until lately afforded by the legal rate of interest in each—that of India being 12, while that of England was 5 per cent.]

brought for coinage by individuals unconnected with the State :[1] the one indicating the amount of the old currency replaced by new coin, the other disclosing the increase made to the circulating medium; though this latter is liable to be affected by too many varying influences to be received as any criterion of the total permanently available to meet the monetary wants of the country.

I limit the present returns to the rupee or standard currency;[2] commencing with those of the year 1833-34, in order to embrace the entire period comprised in the parallel Table at page 81.

[1] [Notwithstanding his remark on the subject at page 41, Prinsep omitted to discriminate in his Table of the Coinages of the Calcutta Mint the separate amounts derived from each source. In the returns of the Provincial Mints (page 81) the difference is duly marked.]

[2] [The coinage of gold may be gathered, from the previous Tables, to have been in proportion to that of silver:

| | | | | | |
|---|---|---|---|---|---|
| In the Calcutta Mint, | from 1801-2 | to 1832-33 | as | 3.18 | to 30.19 |
| ,, | from 1833-34 | to 1854-55 | as | 1.32 | to 41.68 |
| Madras | from 1833-34 | to 1854-55 | as | .73 | to 5.25 |
| Bombay | from 1833-34 | to 1854-55 | as | .007 | to 24. |

No gold was coined in the European mints of the North-Western Provinces.]

*Assay produce of Silver Bullion received into the Mints of Calcutta, Madras, and Bombay, in each year from* 1833-34 *to* 1854-55 *; and of the value of the Silver Coinages for the same period.*

| | Calcutta Mint. | | | Madras Mint. | | | Bombay Mint. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Assay produce of Silver received from individuals. | Value of uncurrent coins received from Treasury officers. | Silver Coinage. | Assay produce of Silver received from individuals. | Value of uncurrent coins received from Treasury officers. | Silver Coinage. | Assay produce of Silver received from individuals. | Value of uncurrent coins received from Treasury officers. | Silver Coinage. |
| | Rupees. | Rupees. | Rupees. | Rupees. | Rupees. | Rupees. | Rupees. | Rupees. | Rupees. |
| 1833–34 | 1,14,14,455 | 64,08,247 | 1,23,47,561 | 19,66,073 | 20,15,465 | 43,11,500 | 10,03,869 | 79,287 | 10,83,156 |
| 1834–35 | 83,08,557 | 36,99,588 | 1,33,10,055 | 16,95,848 | 17,57,313 | 35,21,000 | 47,55,828 | 3,19,458 | 50,75,286 |
| 1835–36 | 80,88,265 | 1,36,85,562 | 1,62,49,960 | | | | 54,88,186 | 9,46,578 | 64,34,764 |
| 1836–37 | 66,55,749 | 2,01,44,738 | 2,98,14,302 | | | | 59,36,244 | 23,35,633 | 82,71,877 |
| 1837–38 | 1,30,96,273 | 1,17,80,627 | 2,09,34,103 | The operations of this Mint were suspended from 1835 to 1841. | | | 50,44,627 | 59,04,008 | 1,09,48,636 |
| 1838–39 | 1,41,26,786 | 99,74,839 | 2,67,63,743 | | | | 58,21,565 | 59,51,257 | 1,17,72,822 |
| 1839–40 | 1,25,58,782 | 90,22,939 | 2,15,77,576 | | | | 66,53,727 | 31,75,174 | 98,28,901 |
| 1840–41 | 1,04,76,052 | 56,52,719 | 1,64,10,686 | | | | 61,68,870 | 58,69.366 | 1,20,38,236 |
| 1841–42 | 97,71,487 | 84,49,146 | 2,51,26,312 | 4,77,640 | 25,72,885 | 25,85,978 | 43,74,350 | 77,02,971 | 51,75,329 |
| From China | 64,66,215 | | | | | | | | |
| 1842–43 | 1,76,80,544 | 19,75,137 | 2,06,11,864 | 9,11,236 | 8,07,271 | 16,40,203 | 39,51,850 | 20,98,840 | 1,07,95,668 |
| 1843–44 | 1,93,12,790 | 39,23,306 | 2,17,66,075 | 11,93,613 | 36,17,818 | 42,28,459 | 1,48,90,842 | 19,65,848 | 2,07,32,497 |
| 1844–45 | 1,86,68,022 | 92,63,533 | 2,83,35,602 | 3,96,322 | 20,31,130 | 31,72,430 | 1,65,67,857 | 8,19,571 | 1,54,60,180 |
| 1845–46 | 94,00,729 | 70,18,940 | 2,25,32,332 | 5,31,824 | 25,51,079 | 22,32,281 | 1,26,71,208 | 47,71,270 | 1,36,60,807 |
| 1846–47 | 95,64,692 | 68,33,535 | 1,64,78,122 | 2,01,602 | 52,38,762 | 60,84,016 | 56,45,965 | 19,98,206 | 66,46,956 |
| From China | 24,17,314 | | | | | | | | |
| 1847–48 | 44,90,831 | 34,44,763 | 1,01,19,938 | 1,03,186 | 28,95,526 | 34,95,301 | 16,21,861 | 24,76,891 | 42,07,359 |
| 1848–49 | 92,10,387 | 52,59,827 | 1,33,03,269 | 1,76,611 | 12,11,847 | 12,96,676 | Returns not obtainable. | | 1,11,92,701 |
| 1849–50 | 1,03,14,857 | 34,11,031 | 1,35,97,117 | 2,39,889 | 9,48,888 | 8,64,372 | 88,24,597 | 13,26,050 | 96,50,554 |
| 1850–51 | 95,77,598 | 33,33,354 | 1,21,31,097 | 11,96,864 | 19,15,784 | 19,54,271 | 1,19,45,874 | 47,13,940 | 1,20,78,906 |
| 1851–52 | 1,97,62,183 | 19,56,609 | 1,78,80,191 | 15,16,247 | 13,53,124 | 36,27,082 | 1.60,77,378 | 62,78,538 | 2,08,97,949 |
| 1852–53 | 2,71,48,980 | 27,57,583 | 2,73,66,206 | 53,20,920 | 7,78,360 | 39,35,171 | 2,20,43,730 | 13,51,825 | 2,37,98,471 |
| 1853–54 | 1,43,66,179 | 30,60,547 | 2,31,82,702 | 49,23,033 | 6,80,475 | 67,50,846 | 1,35,36,875 | 42,83,536 | 2,26,00,817 |
| 1854–55 [1] | 12,79,622 | 43,95,048 | 70,43,170 | 9,10,176 | 4,00,710 | 28,68,429 | 25,75,235 | 13,15,423 | 37,47,416 |
| | 27,41,57,349 | 14,54,51,618 | 41,68,81,983 | 2,17,61,784 | 3,07,76,437 | 5,25,68,015 | 17,56,00,538 | 6,56,83,863 | 24,60,99,288 |
| | 41,96,08,967 | | | 5,25,38,221 | | | 24,12,84,208 | | |

[1] The diminished coinage in 1854-55 is attributed (authoritatively) to the decrease in the imports of silver bullion in that year.

It will be seen from the above figured details, that, during the last twenty-two years, the grand total of the coinage of silver in the East India Company's mints has reached no less a sum than 71,55,49,286 rupees, or £71,554,928: towards this amount 24,19,11,918 rupees were contributed by the old metal of the worn or recalled currencies; and 47,15,19,671 rupees constituted the proportion of bullion brought for coinage by individuals. It may be instructive to test a section of these returns in connexion with the statistics furnished by the bullion trade of India, illustrated at page 83. To select the same eight years for which the figures have been tabulated in that statement (*i.e.* 1846-7 to 1853-4), it is to be observed, that the total amount of silver bullion—in excess of the returned coin—minted at the three Presidencies, during the period, was over 20 crore of rupees, or twenty millions sterling;[1] while the balance of silver bullion remaining in India, on the traffic of the same interval, is seen to amount to 14,42,82,180 rupees, or less than fourteen and a half millions sterling. The results of the two returns are not so directly dependent on each other, that their non-accordance need cause surprise, nor is there any reason why the five and a half millions of surplus coin may not have been re-exported in that shape, in the ordinary course, even if we did not know that the Company's rupee has hitherto supplied much of the circulating medium of Ceylon, the Mauritius, and the Straits settlements. There is no ground for supposing that any quantity of the silver bullion, used for Mint purposes, is at this time supplied by India itself—though it contributed not unimportantly to the local mints up to 1832-33.[2] We may fairly, therefore, take the ebb and flow of bullion, in the every-day transactions of commerce, as a momentary

[1] [*Detail of Silver Bullion, over and above the recalled coin, minted at the three Presidencies.*

| For the years | Company's Rupees. | |
|---|---|---|
| 1846-47 | 1,78,29,573 | |
| 1847-48 | 62,15,878 | 5,28,11,792, excluding Bombay for 1848-49. |
| 1848-49 | 93,86,998 | |
| 1849-50 | 1,93,79,343 | |
| 1850-51 | 2,27,20,336 | |
| 1851-52 | 3,73,55,808 | 14,74,15,861 |
| 1852-53 | 5,45,13,630 | |
| 1853-54 | 3,28,26,087 | |
| Co's Rs. | 20,02,27,653 | |
| Bengal total | 10,68,53,021 | |
| Madras total | 1,36,78,352 | |
| Bombay total | 7,96,96,280 | |
| Co's Rs. | 20,02,27,653 | —] |

[2] [See Table, page 81.]

index of the amount of coin removed by sea-transport; though such a test would by no means demonstrate either the maximum or minimum of that drain in exceptional instances. The inland or conterminous absorption of coined money, on the other hand, is far beyond the reach of the boldest speculation; but, with an existing frontier line extending from Mekrán to the Straits of Malacca, and with the various imperfectly civilized races on our borders all seeking eagerly for the precious metals, we may imagine that the outgoing in these directions can scarcely be inconsiderable. However, even admitting that India temporarily retains the full 14.4 millions of the 20 coined for her in eight years, the amount can by no means be said to be excessive,[1] nor is it to be expected—while the monetary laws remain as at present constituted—that the demand should be proportionately lessened; and, as much has been written regarding the undue absorption of bullion by India at large, it may be fitting that I should observe that, whatever may have constituted the attracting magnet, or wherever the ultimate resting-place of the precious metals may have been, in olden times; there is now good and sufficient reason why silver should continue to flow towards our Eastern dominions. Not to touch upon the obvious commercial necessities of our trade as of late balanced, it is to be remembered that India has advanced considerably in material prosperity: not only is there enhanced security of life and property, together with a manifest and natural increase of the population, but the facilities of traffic and real wealth have progressed with equal strides under our rule. There is now but little object in hoarding, less in secreting; the palpable value of money is better understood; and even its conversion into ornaments has comparatively ceased since the introduction of the more extensively alloyed rupee, the hardness of the metal of which neither workers

[1] [The population returns, though most minutely accurate for some portions of India, are but mere guess-work for others. The following is the latest return I have been able to obtain at the East India House. This will give for British India a return of 1.1 rupee per head of increase to the currency in eight years:

POPULATION OF INDIA.

| | |
|---|---|
| Under direct administration of the Governor-General (including the Panjáb, Nagpore, and Oude) | 23,055,972 |
| Under Lieut.-Governor of Bengal | 41,212,562 |
| Under Lieut.-Governor of North-West Provinces | 33,216,365 |
| Under Governor of Madras | 22,437,297 |
| Under Governor of Bombay | 11,109,067 |
| Total British Possessions | 131,031,263 |
| Total Independent and protected Native States | 48,423,630 |
| Total Foreign States (French and Portuguese) | 517,149 |
| Total | 179,972,042 —] |

nor wearers approve. Equally have the advantages of direct money payments reached the comprehension of the masses, for not only, as has been remarked,[1] do the landholders no longer pay the Government demand in kind, but, more important still, the adherence to that primitive mode of liquidation has been generally discontinued among the village communities in their internal apportionment of responsibilities.

I may be permitted, in conclusion, to remark, in regard to the proposed re-introduction of a gold coinage, that I am altogether opposed to such a measure. A metal that must be expected progressively to fall in value—whatever the immediate needs of Europe may seem to evidence to the contrary—is not calculated to be favorably received by the people of India, especially as its market rate has already been sensibly affected in that country by the gold discoveries of Australia.

However, on the other hand, I am confident that much of the threatened difficulty might be met by a well-devised scheme for a paper currency, to consist of Government Notes duly notified as legal tenders, and definitively recognised as receivable in payment of the State revenue; but, in such a case, there must be no reservation of "until further orders," as in the Gold Proclamation of 1841; nor must there be permitted to exist a possibility of any future Administration reducing the One Hundred Rupee Note into one of the current value of eighty,[2] as was effected, in regard to all the securities involved, by the conversion of the old five per cent. stock. Possibly few nations could be met with, better prepared than the people of India, to accept a sound and carefully elaborated plan for a representative currency. As contrasted with their conventional morality, whether religious or social, their commercial faith and probity stand out in prominent relief. What they respect among themselves, they revere in their rulers; and, in spite of some awkward incidents in the history of British India, the English name still stands exalted with the mass of the population, who have concerned themselves less about

1. [Col. Sykes, *supra cit.*, p. 84.]

2 [The Government orders of 1853–54 directly affected the interest alone of the funds assailed—reducing it from 5 to 4 per cent.—the selling price of the securities remaining little below par; but the opening of the 5 per cent. loan of 1855 depreciated the market value of the principal of the converted stock, in proportion to the relatively enhanced rate of interest offered under the new loan. In the one case, the public naturally inferred that the Government was acting in good faith, and justified—by knowledge inaccessible to the non-official world—in the reduction enforced; a feeling that was still further confirmed by the distinctive proclamation of the closing of all open 4 per cent. loans, and the invitation of subscriptions at 3½ per cent. In the second instance, those who had relied upon the equity, superior information, or prescience of the Government, discovered their error.]

the acts and policy of the Central Government, than the immediate rule of the high-principled gentlemen whom this country has ordinarily sent to administer in detail the local sections of our Eastern empire. In similar relative degree to their advancement and civilization, does their knowledge of the intricacies of banking and exchange strike our European perceptions; so that, whether under the aspect of confidence in our probity, or comprehension of our measures, the Indian public may be said to be fully prepared to welcome an improved and enlarged system of state finance. But, as I desire to confine myself to the record of facts, and ordinarily abstain from speculation or argument, I bring these observations to a somewhat abrupt close.—E. T.]

[As Prinsep's Useful Tables are now definitively associated with his Numismatic Essays, it will be expedient to amplify the former by any information regarding Indian coinage equivalents or monetary values that may chance to be readily accessible; I therefore append a few notes on these subjects, extracted from that admirable work, Sir H. M. Elliot's 'Glossary of Terms used in the North-Western Provinces of India.'[1]

"DUMREE, دمڑی दमड़ी damrí. . . . . Dumree is commonly known as a nominal coin, equal to $3\frac{1}{8}$ or $3\frac{1}{4}$ Dams; or between 2 and 3 Gundas—so that a Dumree varies from 8 to 12 Cowrees, according to the good will and pleasure of the money-changers. It may be useful to subjoin from the 'Dewan Pusund' a table showing the value of Dumrees and Dams:—

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Dumree, | ... | ... | ... | ... | $3\frac{1}{4}$ | dams. | |
| 2 | Dumrees, | ... | ... | ... | ... | $6\frac{1}{2}$ | dams, ..... 1 | chhudam. |
| 3 | Dumrees, | ... | ... | ... | ... | $9\frac{3}{4}$ | dams. | |
| 4 | Dumrees, | ... | ... | ... | ... | $12\frac{1}{2}$ | dams, ..... 1 | adhela. |
| 5 | Dumrees, | ... | ... | ... | ... | 15 | dams. | |
| 6 | Dumrees, | ... | ... | ... | ... | $18\frac{3}{4}$ | dams, ..... $\frac{3}{4}$ | puesa. |
| 7 | Dumrees, | ... | ... | ... | ... | 22 | dams. | |
| 8 | Dumrees, | ... | ... | ... | ... | 25 | dams, ..... 1 | puesa. |
| 9 | Dumrees, | ... | ... | ... | ... | 28 | dams. | |
| 10 | Dumrees, | ... | ... | ... | ... | $31\frac{1}{4}$ | dams, ..... $1\frac{1}{4}$ | puesa. |
| 11 | Dumrees, | ... | ... | ... | ... | $34\frac{1}{4}$ | dams. | |
| 12 | Dumrees, | ... | ... | ... | ... | $37\frac{1}{4}$ | dams, ..... $1\frac{1}{2}$ | puesa. |
| 13 | Dumrees, | ... | ... | ... | ... | 40 | dams. | |
| 14 | Dumrees, | ... | ... | ... | ... | 44 | dams, ..... $1\frac{3}{4}$ | puesa. |

[1] [To those who are curious in the science of numbers and would study the progressive arrangement of popular totals, I would recommend the perusal of the elaborate article, 'Chaurási,' p. 151.]

| | | | | | | |
|---|---|---|---|---|---|---|
| 15 Dumrees, | ... | ... | ... | ... | 47 | dams. |
| 16 Dumrees, | ... | ... | ... | ... | 50 | dams, ..... 1 tuka. |

The table is given with some slight variations in the 'Zoobdutu-l-Quwaneen,' but in neither are the smaller fractional amounts given with correctness.

"DAM, دام दाम dâm. . . . . The Dam in the Ayeen-i-Akberee, and in most Revenue accounts, is considered to be the 40th part of a rupee; but to the common people it is known as the 50th part of a Tuka: 25 therefore go to a Pysa, and 12½ to an Adhela.

"CHHUDAM, چھدام छदाम chhadâm. . . . . Literally, six dams; equal to two dumrees. The proper amount is six and a quarter dams, but by abbreviation it is called Chhudam.

"GUNDA, گنڈا गंडा gandâ. . . . . Like the Dam, the Gunda of account and the Gunda of practice do not coincide. Gundas of account are but little used in the North-Western Provinces, except in Benâres and the Dehra Doon, and, in consequence of its former subjection to Oudh, the Nuzurâna accounts of Rohilcund are frequently drawn out in Gundas. This Gunda is the 20th part of an Anna. The Gunda known to the common people is not of stable amount; sometimes four, and sometimes five, and sometimes even six, go to a pucka Dumree, or Chhudam, according to the pleasure of the money dealers, or the state of the market. Notwithstanding this variable amount, as a Gunda is equivalent to four Cowrees, 'to count by Gundas,' signifies to count by fours, or by the quarternary scale, to which the natives are very partial;—in the same way as to count by gahees, or punjas, is to count by fives, or by the quinary scale. As four Cowrees make one Gunda, so do twenty Gundas make one Pun, and sixteen Puns make one Kuhâwun. But there are grades of monetary value even below that of Cowree; for the Hindûs seem as fond of dealing with these infinitesimal quantities, as they are with the higher numbers, as exemplified in the article Crore. Thus 3 Crant, or 4 Kak, or 5 But, or 9 Dunt, or 27 Jou, or 32 Dar, or 80 Til, or 800 Suno are each equivalent to one Cowree. These are not in practical use in the North-Western Provinces, but are entered in several account books, and many of them appear to be employed in the Bazar translations of Cuttack and parts of Bengal. See Rushton's 'Gazetteer,' vol. i., p. 182, 1841. The Cowree shell, the Cypræa Moneta, has been subject to strange diminution of value, in consequence of the facilities of commerce, by which their worth has been depressed below that of the precious metals. In 1740, a rupee exchanged for 2,400 Cowrees; in 1756, for 2,560 Cowrees; and at this time as many as 6,500 Cowrees may be obtained for the rupee. Cowree in Persian is translated by Khur-mohra, literally, a 'jackass's' or 'mule's' shell; because mules are ornamented in that country with trappings of shells, as a Gosain's bullock is in this country. In Arabic it is known by Wuda, which Ibn Batuta says is carried in large quantities from the Maldive Islands to Bengal, where it is used as coin; and therefore there can be no doubt that the Cypræa Moneta is meant. The Kamoos adds تعلق الدفع العين that it is suspended from the neck to avert the evil eye, as it is in India to this day,[1] provided the neck shell is split or broken. Among European nations, excepting the English, these shells are known by the name of Porceli,

[1] ["Gunda is also the name applied to the knotted string which is suspended round a child's neck for the same purpose; but not, apparently, because it has any connection with the Cowree Amulet."]

Porcellain, Porcellanen, and Porcelaine, on account of the fancied resemblance of their shape to that of the back of a little pig, whence we have the Chinese porcelain, of which the glaze, or varnish, is similar to that of the Cowree.

"CRORE, كرور करोड़ karor . . . . Ten millions. The names of the higher numbers are thus given in the 'Zoobdut-ool-Quwaneen.' 100 Crore = 1 Urub; 100 Urub = 1 K,hurub; 100 K,hurub = 1 Neel; 100 Neel = 1 Pudum; 100 Pudum = 1 Sunk,h; 100 Sunk,h = 1 Uld; 100 Uld = 1 Unk; 100 Unk = 1 Pudha."]

# BRITISH INDIAN

# WEIGHTS AND MEASURES.

The system of Weights established by Regulation VII. of 1833, is founded on the same unit as the rupee of the equalized monetary system of British India, it having been found that the weight of the Madras, Bombay, and Farrukhábád rupee, already very generally used throughout Upper and Western India, as the foundation of the Ser and Man, could be substituted for the sikká weight of Bengal by a very slight modification of the latter, which would be hardly perceptible in commercial dealings. Other palpable advantages of the introduction of the new weight were pointed out,[1] of which it is only necessary here to allude to the three following:—

1. That the *man* formed from the modified weight would be precisely equal to one hundred English troy pounds; and

2. That thirty-five *sers* would also be precisely equal to seventy-two pounds avoirdupois:—thus establishing a simple connection void of fractions, between the two English metrical scales and that of India.

3. The weight of the new unit nearly accorded with the average weight of many of the native tolás sent home for examination at the London mint, by order of the Honourable Court of Directors; as well as with that of Akbar, deduced from the weight of many coins of that emperor.

We shall begin the present division of our subject, as in the case of the Indian coins, by setting forth in the first instance the present legal system, and afterwards providing a brief descriptive catalogue of the many other weights prevailing throughout the Company's provinces, with comparative tables for the conversion of one denomination into the other.

The unit of the British Indian ponderary system is called the tolá. It weighs 180 grains English troy weight. From it upwards

[1] *Vide* a paper on the subject in the 'Journal of the Asiatic Society of Bengal' for October, 1832, vol. i., p. 445.

are derived the heavy weights, viz.:—Chhaták, Ser, and Man (or Maund); and, by its subdivisions, the small or jeweller's weights, called Máshas, Ratís, and Dháns.

The following scheme comprehends both of these in one series:—

| Man. | Panserí.[1] | Ser.[2] | Chhaták.[3] | Tolá.[4] | Másha.[5] | Ratí.[6] | Dhán.[7] |
|---|---|---|---|---|---|---|---|
| 1 | 8 | 40 | 640 | 3200 | 38400 | 307200 | 1228800 |
| | 1 | 5 | 80 | 400 | 4800 | 38400 | 153600 |
| | | 1 | 16 | 80 | 960 | 7680 | 30720 |
| | | | 1 | 5 | 60 | 480 | 1920 |
| | | | | 1 | 12 | 96 | 384 |
| | | | | | 1 | 8 | 32 |
| | | | | | | 1 | 4 |

The *man* (or that weight to which it closely accords in value, and to which it is legally equivalent in the new scale) has been hitherto better known among Europeans by the name of 'bázár maund,' but upon its general adoption, under Regulation VII. of 1833, for all transactions of the British Government, it should be denominated the British Maund (in Hindí, *Angrezí Man*), to distinguish it at once from all other weights in use throughout the country.[8]

The Panserí is, as its name denotes, a five-ser weight, and therefore should not form an integrant point of the scale; but, as its use is very general, it has been introduced for the convenience of reference.

The Ser being the commonest weight in use in the retail business of the bázárs in India, and being liable, according to the pernicious system hitherto prevalent, to vary in weight for every article sold as well as for every market, is generally referred to the common unit in native mercantile dealings, as, "the ser of so many tolás," (or sikkás, barís, takás, etc.). The standard or bázár ser being always 80 tolás.

The chhaták is the lowest denomination of the gross weights, and is commonly divided into halves and quarters (called in Bengálí, *kacheha*) thus marking the line between the two series, which are otherwise connected by the relation of the ser, etc. to the tolá.

The tolá is chiefly used in the weighing of the precious metals and

[1] *Panserí*, پنسيري from پانچ or پنج, पञ्च "five," and سير "a *ser*."

[2] *Ser*, शेर शेटक (Shakespear सेटक), سير.

[3] *Chhaták*, छटांक from s. षट्, "six," and अंक "a mark."

[4] *Tolá*, तोला تولا.

[5] *Másha*, माष माषा, ماشه.

[6] *Ratí*, s. रति, रती, رتي, रक्तिका. [7] *Dhán*, धान्य 'grain, rice.'

[8] In the same way the Madras, Bombay, Farrukhábad rupee (when the sikká rupee is abolished, and an English device adopted), may be called "the British rupee," and in the native languages *Rúpya Angrezí*.

coin; all bullion at the mints is received in this denomination, and the tables of bullion produce (as seen in the foregoing pages) are calculated per 100 tolás. It is also usual at the mints to make the subdivisions of the tolá into ánás (sixteenths) and pá'ís, in lieu of máshas and ratís.

Máshas, ratís, and dháns, are used chiefly by native goldsmiths and jewellers. They are also employed in the native evaluation by assay of the precious metals; thus, '10 máshas fine' signifies 10-12ths pure, and corresponds to '10oz. touch' of the English assay report of silver. There is a closer accordance with the English gold assay scale, inasmuch as the 96 ratís in a tolá exactly represent the 96 carat grains in the gold assay pound, and the dhán, the quarter-grain. As it is sometimes necessary to convert the assay report from one denomination into the other,[1] the following comparative table is here inserted.

TABLE *of the Correspondence of English and Indian Assay Weights.*

| ENGLISH ASSAY. | | | | HINDU ASSAY FOR BOTH METALS. | | ENGLISH ASSAY. | | | | HINDU ASSAY. | | ENGLISH ASSAY. | | | | HINDU ASSAY. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Silver. | | Gold. | | | | Silver. | | Gold. | | | | Silver. | | Gold. | | | |
| Touch. | | Touch. | | Fine. | | Touch. | | Touch. | | Fine. | | Touch. | | Touch. | | Fine. | |
| oz. | dwts. | ct. | grs. | msh. | rat. | oz. | dwts. | ct. | grs. | msh. | rat. | oz. | dwts. | ct. | grs. | msh. | rat. |
| 12 | 0 | 24 | 0 | 12 | 0 | 11 | 0 | 22 | 0 | 11 | 0 | 10 | 0 | 20 | 0 | 10 | 0 |
| 11 | 17½ | 23 | 3 | 11 | 7 | 10 | 17½ | 21 | 3 | 10 | 7 | 9 | 17½ | 19 | 3 | 9 | 7 |
| 11 | 15 | 23 | 2 | 11 | 6 | 10 | 15 | 21 | 2 | 10 | 6 | 9 | 15 | 19 | 2 | 9 | 6 |
| 11 | 12½ | 23 | 1 | 11 | 5 | 10 | 12½ | 21 | 1 | 10 | 5 | 9 | 12½ | 19 | 1 | 9 | 5 |
| 11 | 10 | 23 | 0 | 11 | 4 | 10 | 10 | 21 | 0 | 10 | 4 | 9 | 10 | 19 | 0 | 9 | 4 |
| 11 | 7½ | 22 | 3 | 11 | 3 | 10 | 7½ | 20 | 3 | 10 | 3 | 9 | 7½ | 18 | 3 | 9 | 3 |
| 11 | 5 | 22 | 2 | 11 | 2 | 10 | 5 | 20 | 2 | 10 | 2 | 9 | 5 | 18 | 2 | 9 | 2 |
| 11 | 2½ | 22 | 1 | 11 | 1 | 10 | 2½ | 20 | 1 | 10 | 1 | 9 | 2½ | 18 | 1 | 9 | 1 |

(To find the corresponding decimal assay, see the tables in pages 10, 11. The English assay report is generally 'so much worse (or better)' than standard, but the *touch* is easily known therefrom, the standard being 11 oz. for silver and 22 carats for gold; or 11 máshas, Hindú reckoning.)

The correspondence of the Indian system of weights with the troy weight of England, and with the 'système métricale' of France, may be best shown by a table. The coincidence of the former is perfect: in the latter, the másha nearly accords with the gramme, and the ser with the kilogramme.

| BRITISH INDIAN WEIGHTS. | ENGLISH TROY WEIGHTS. | | | | FRENCH WEIGHTS. |
|---|---|---|---|---|---|
| | lbs. | oz. | dwts. | grs. | grammes. |
| One Man | = 100 | 0 | 0 | 0 | = 37320.182 |
| One Ser | = 2 | 6 | 0 | 0 | = 933.005 |
| One Chhatâk | = 0 | 1 | 17 | 12 | = 58.310 |
| One Tolá | = 0 | 0 | 7 | 12 | = 11.662 |
| One Másha | = 0 | 0 | 0 | 15 | = 0.972 |
| One Ratí | = 0 | 0 | 0 | 1.875 | = 0.122 |

[1] Especially in the translation of Regulations concerning the mints, the English expressions being unintelligible without explanation.

For the conversion of English troy weights into those of India, the following scale will suffice, since the simplicity of their relation renders a more detailed table unnecessary.

| Lb. Troy. | Oz. | Dwt. | Grain. | | Tolás and Decimals. |
|---|---|---|---|---|---|
| 1 | 12 | 240 | 5760 | = | 32.000 |
| | 1 | 20 | 480 | = | 2.6666 etc. |
| | | 1 | 24 | = | 0.1333 etc. |
| | | | 1 | = | 0.0055 etc. |

The accordance of the *man* weight with the 100lbs. troy of England affords a ready means of ascertaining its relative value in the standards of other countries employed in weighing the precious metals, since tables of the latter are generally expressed in lbs. troy. The following are a few of the valuations for the principal weights of Europe, etc. extracted from Kelly's 'Cambist,' p. 222. The weights in troy grains have been converted into tolás by dividing them by 180.

TABLE *of Comparison of the Tolá and Man with the Gold and Silver, or Troy, weights of other countries.*

| PLACE AND DENOMINATION. | | Weight of a single lb, mark, etc. in tolás. | Number equal to 1 man, or 100 lbs. roy. |
|---|---|---|---|
| ALEPPO | Metical | 0.405 | 7890.410 |
| BASRA | Miscal | 0.450 | 8000.000 |
| CAIRO | Rottolo | 36.965 | 86.564 |
| CALICUT | Miscal | 0.383 | 8347.826 |
| CHINA | Tael | 3.221 | 993.446 |
| CONSTANTINOPLE | Chequee | 27.538 | 116.199 |
| DAMASCUS | Ounce | 2.600 | 1252.173 |
| DENMARK | Mark | 20.183 | 158.546 |
| ENGLAND | Pound | 32.000 | 100.000 |
| FRANCE | Kilogramme | 85.745 | 37.320 |
| GERMANY | Cologne mark | 20.044 | 159.645 |
| HOLLAND | Mark | 21.100 | 151.658 |
| ITALY | Florence and Leghorn libra | 29.111 | 109.923 |
| MOCHA | Vakia | 2.655 | 1205.020 |
| PEGU | Tical | 1.138 | 2427.307 |
| PERSIA | Dirham | 0.839 | 3812.297 |
| PORTUGAL | Mark | 19.675 | 162.642 |
| PRUSSIA | Mark | 20.050 | 159.600 |
| ROME | Libbra | 29.077 | 110.049 |
| RUSSIA | Pound | 35.102 | 91.161 |
| SPAIN | Mark | 19.725 | 162.230 |
| VENICE | Mark | 20.452 | 156.457 |
| VIENNA | Mark | 24.072 | 132.933 |

The principal dealings in bullion being with England, where it is weighed by the pound troy, while in India it is received by the tolá, a simple table for the mutual conversion of these two weights (without regard to mans and sers) may be useful: it needs no explanation.

## TABLE *for the mutual conversion of Tolás and Pounds Troy.*

| TOLÁS into POUNDS TROY and DECIMALS. | | | | TROY POUNDS into TOLÁS. | | | |
|---|---|---|---|---|---|---|---|
| Tolás. | Pounds. | Tolás. | Pounds. | Pounds. | Tolás. | Pounds. | Tolás. |
| 1000 | 31.2500 | 550 | 17.1875 | 100 | 3200 | 55 | 1760 |
| 990 | 30.9375 | 540 | 16.8750 | 99 | 3168 | 54 | 1728 |
| 980 | 30.6250 | 530 | 16.5625 | 98 | 3136 | 53 | 1696 |
| 970 | 30.3125 | 520 | 16.2500 | 97 | 3104 | 52 | 1664 |
| 960 | 30.0000 | 510 | 15.9375 | 96 | 3072 | 51 | 1632 |
| 950 | 29.6875 | 500 | 15.6250 | 95 | 3040 | 50 | 1600 |
| 940 | 29.3750 | 490 | 15.3125 | 94 | 3008 | 49 | 1568 |
| 930 | 29.0625 | 480 | 15.0000 | 93 | 2976 | 48 | 1536 |
| 920 | 28.7500 | 470 | 14.6875 | 92 | 2944 | 47 | 1504 |
| 910 | 28.4375 | 460 | 14.3750 | 91 | 2912 | 46 | 1472 |
| 900 | 28.1250 | 450 | 14.0625 | 90 | 2880 | 45 | 1440 |
| 890 | 27.8125 | 440 | 13.7500 | 89 | 2848 | 44 | 1408 |
| 880 | 27.5000 | 430 | 13.4375 | 88 | 2816 | 43 | 1376 |
| 870 | 27.1875 | 420 | 13.1250 | 87 | 2784 | 42 | 1344 |
| 860 | 26.8750 | 410 | 12.8125 | 86 | 2752 | 41 | 1312 |
| 850 | 26.5625 | 400 | 12.5000 | 85 | 2720 | 40 | 1280 |
| 840 | 26.2500 | 390 | 12.1875 | 84 | 2688 | 39 | 1248 |
| 830 | 25.9375 | 380 | 11.8750 | 83 | 2656 | 38 | 1216 |
| 820 | 25.6250 | 370 | 11.5625 | 82 | 2624 | 37 | 1184 |
| 810 | 25.3125 | 360 | 11.2500 | 81 | 2592 | 36 | 1152 |
| 800 | 25.0000 | 350 | 10.9375 | 80 | 2560 | 35 | 1120 |
| 790 | 24.6875 | 340 | 10.6250 | 79 | 2528 | 34 | 1088 |
| 780 | 24.3750 | 330 | 10.3125 | 78 | 2496 | 33 | 1056 |
| 770 | 24.0625 | 320 | 10.0000 | 77 | 2464 | 32 | 1024 |
| 760 | 23.7500 | 310 | 9.6875 | 76 | 2432 | 31 | 992 |
| 750 | 23.4375 | 300 | 9.3750 | 75 | 2400 | 30 | 960 |
| 740 | 23.1250 | 290 | 9.0625 | 74 | 2368 | 29 | 928 |
| 730 | 22.8125 | 280 | 8.7500 | 73 | 2336 | 28 | 896 |
| 720 | 22.5000 | 270 | 8.4375 | 72 | 2304 | 27 | 864 |
| 710 | 22.1875 | 260 | 8.1250 | 71 | 2272 | 26 | 832 |
| 700 | 21.8750 | 250 | 7.8125 | 70 | 2240 | 25 | 800 |
| 690 | 21.5625 | 240 | 7.5000 | 69 | 2208 | 24 | 768 |
| 680 | 21.4500 | 230 | 7.1875 | 68 | 2176 | 23 | 736 |
| 670 | 20.9375 | 220 | 6.8750 | 67 | 2144 | 22 | 704 |
| 660 | 20.6250 | 210 | 6.5625 | 66 | 2112 | 21 | 672 |
| 650 | 20.3125 | 200 | 6.2500 | 65 | 2080 | 20 | 640 |
| 640 | 20.0000 | 190 | 5.9375 | 64 | 2048 | 19 | 608 |
| 630 | 19.6875 | 180 | 5.6250 | 63 | 2016 | 18 | 576 |
| 620 | 19.3750 | 170 | 5.3125 | 62 | 1984 | 17 | 544 |
| 610 | 19.0625 | 160 | 5.0000 | 61 | 1952 | 16 | 512 |
| 600 | 18.7500 | 150 | 4.6875 | 60 | 1920 | 15 | 480 |
| 590 | 18.4375 | 140 | 4.3750 | 59 | 1888 | 14 | 448 |
| 580 | 18.1250 | 130 | 4.0625 | 58 | 1856 | 13 | 416 |
| 570 | 17.8125 | 120 | 3.7500 | 57 | 1824 | 12 | 384 |
| 560 | 17.5000 | 100 | 3.4375 | 56 | 1792 | 11 | 352 |

*To convert the decimals of a lb. into ounces and dwts., and* vice versâ.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 12 oz. | = 1.000 | 6 oz. | = 0.500 | 20 dwt. | = 0.083 | 9 dwt. | = 0.037 |
| 11 | .916 | 5 | .416 | 18 | .075 | 7 | .029 |
| 10 | .833 | 4 | .333 | 16 | .066 | 5 | .020 |
| 9 | .750 | 3 | .250 | 14 | .058 | 3 | .012 |
| 8 | .666 | 2 | .166 | 12 | .051 | 2 | .008 |
| 7 | .583 | 1 | .083 | 10 | .041 | 1 | .004 |

1 ounce troy = 2.667 tolás, or 2 tolás 8 máshas.
$7\frac{1}{2}$ dwts. „ = 1 tolá, and 1 dwt. = 1.33 tolá.

The same degree of correspondence cannot be expected between the Indian weights and the avoirdupois weights of England; but, as the latter are employed in all the transactions of commerce, excepting those of bullion and some other trifling articles, it becomes necessary to give tables for their conversion at greater length. In these, as on former occasions, the system of expressing fractions in decimals has been preferred, from the very great facility it affords in taking out the equivalents of quantities to which the tables do not extend. Decimal numeration is too well understood in the present day to require explanation, but one example may be advantageously given as applying to all the tables hereafter constructed on the same principle:

*Required the equivalent of* 57,353 *mans,* 35 *sers,* 6 *chhatáks, in avoirdupois pounds.*

Taking the numbers opposite to 57, 35, and 30 respectively, and removing the decimal point,—in the first three places, to the right hand;—in the second, one place to the right;—and in the third, one place to the left, we have

| | | |
|---|---|---|
| 57,000 mans | = | 4690286. |
| 350 | = | 38800. |
| 3 | = | 246.857 |
| 37 sers | = | 76.114 |
| 6 chhats. | = | .771 |

lbs. 4719409.742 = 12 ounces nearly.

Since 35 sers are exactly equal to 72 pounds avoirdupois, the following simple and accurate rules for their mutual conversion, will be found equally convenient with the table.

RULE I.—*To convert Indian weight into avoirdupois weight.*

1. Multiply the weight in sers by 72, and divide by 35: the result will be the weight in lbs. av.

2. Or, multiply the weight in mans by 36, and divide by 49: the result will be the weight in cwt. av.

RULE II.—*To convert avoirdupois weight into Indian weight.*

1. Multiply the weight in lbs. av. by 35, and divide by 72; the result will be the weight in sers.

2. Or, multiply the weight in cwts. by 49, and divide by 36: the result will be the weight in mans, or maunds.[1]

One ton = 27.222 mans, or $27\frac{1}{4}$ mans nearly.

One man = $82\frac{2}{7}$lbs. av. exactly.

[1] For facility of recollection this rule may be expressed in *arithmetical* poetry thus:

Of one hundred weight should you incline
A sum in Indian *mans* to fix;—
First multiply by forty-nine,
And then divide by thirty-six.

TABLE *for converting New Bazar Mans (or Maunds), Sers, and Chhatáks, into Avoirdupois Pounds, and Decimals.*

| Mans. | Pounds, Avoir. | Mans. | Pounds, Avoir. | Sers. | Pounds, Av. | Value of oz. and dram in decimals of lb. |
|---|---|---|---|---|---|---|
| | | | | | | oz. dec. |
| 100 | 8228.571 | 55 | 4525.714 | sers 40 | 82.286 | 16 = 1.0000 |
| 99 | 8146.285 | 54 | 4443.429 | 39 | 80.228 | 15½ .9687 |
| 98 | 8064.000 | 53 | 4361.143 | 38 | 78.171 | 15 .9375 |
| 97 | 7981.714 | 52 | 4278.857 | 37 | 76.114 | 14½ .9063 |
| 96 | 7899.428 | 51 | 4196.572 | 36 | 74.057 | 14 .8750 |
| 95 | 7817.142 | 50 | 4114.286 | 35 | 72.000 | 13½ .8438 |
| 94 | 7734.857 | 49 | 4032.000 | 34 | 69.943 | 13 .8125 |
| 93 | 7652.571 | 48 | 3949.715 | 33 | 67.886 | 12½ .7813 |
| 92 | 7570.285 | 47 | 3867 429 | 32 | 65.829 | 12 .7500 |
| 91 | 7488.000 | 46 | 3785.143 | 31 | 63.771 | 11½ .7188 |
| 90 | 7405.714 | 45 | 3702.857 | 30 | 61.714 | 11 .6875 |
| 89 | 7323.428 | 44 | 3620.572 | 29 | 59.657 | 10½ .6563 |
| 88 | 7241.143 | 43 | 3538.286 | 28 | 57.600 | 10 .6250 |
| 87 | 7158.857 | 42 | 3456.000 | 27 | 55.543 | 9½ .5938 |
| 86 | 7076.571 | 41 | 3373.715 | 26 | 53.486 | 9 .5625 |
| 85 | 6994.285 | 40 | 3291.429 | 25 | 51.429 | 8½ .5313 |
| 84 | 6912.000 | 39 | 3209.143 | 24 | 49.371 | 8 .5000 |
| 83 | 6829.714 | 38 | 3126.858 | 23 | 47.314 | 7½ .4688 |
| 82 | 6747.428 | 37 | 3044.572 | 22 | 45.257 | 7 .4375 |
| 81 | 6665.143 | 36 | 2962.286 | 21 | 43.200 | 6½ .4063 |
| 80 | 6582.857 | 35 | 2880.000 | 20 | 41.143 | 6 .3750 |
| 79 | 6500.571 | 34 | 2797.715 | 19 | 39.086 | 5½ .3438 |
| 78 | 6418.286 | 33 | 2715.429 | 18 | 37.029 | 5 .3125 |
| 77 | 6336.000 | 32 | 2633.143 | 17 | 34.971 | 4½ .2813 |
| 76 | 6253.714 | 31 | 2550.858 | 16 | 32.914 | 4 .2500 |
| 75 | 6171.428 | 30 | 2468.572 | 15 | 30.857 | 3½ .2188 |
| 74 | 6089.143 | 29 | 2386.286 | 14 | 28.800 | 3 .1875 |
| 73 | 6066.857 | 28 | 2304.000 | 13 | 26.743 | 2½ .1563 |
| 72 | 5924.571 | 27 | 2221.715 | 12 | 24.686 | 2 .1250 |
| 71 | 5842.286 | 26 | 2139.429 | 11 | 22.628 | 1½ .0938 |
| 70 | 5760.000 | 25 | 2057.143 | 10 | 20.571 | 1 .0625 |
| 69 | 5677.714 | 24 | 1974.858 | 9 | 18.514 | 15 drs. = .0586 |
| 68 | 5595.429 | 23 | 1892.572 | 8 | 16.457 | 14 .0547 |
| 67 | 5513.143 | 22 | 1810.286 | 7 | 14.400 | 13 .0508 |
| 66 | 5430.857 | 21 | 1728.000 | 6 | 12.343 | 12 .0469 |
| 65 | 5348.571 | 20 | 1645.715 | 5 | 10.286 | 11 .0430 |
| 64 | 5266.286 | 19 | 1563.430 | 4 | 8.229 | 10 .0391 |
| 63 | 5184.000 | 18 | 1481.144 | 3 | 6.171 | 9 .0351 |
| 62 | 5101.714 | 17 | 1398.858 | 2 | 4.114 | 8 .0312 |
| 61 | 5019.429 | 16 | 1316.573 | 1 | 2.057 | 7 .0274 |
| 60 | 4937.143 | 15 | 1234.287 | Chhat. 8 | 1.028 | 6 .0234 |
| 59 | 4854 857 | 14 | 1152.000 | 4 | 0.514 | 5 .0194 |
| 58 | 4772.572 | 13 | 1069.715 | 3 | 0.386 | 4 .0156 |
| 57 | 4690.286 | 12 | 987.430 | 2 | 0.257 | 3 .0117 |
| 56 | 4608.000 | 11 | 905.144 | 1 | 0.129 | 2 .0078 |

(The last column serves for the conversion of the decimals of a pound avoirdupois into ounces and drams. It will be found useful also with the two following Tables.)

TABLE *for the conversion of Mans (or Maunds) into Tons, Hundredweights, and Pounds.*

| Mans. | Tons. | cwts. | lbs. | Mans. | Tons. | cwts. | lbs. |
|---|---|---|---|---|---|---|---|
| 100000 | 3673 | 9 | 43.00 | 100 | 3 | 13 | 52.57 |
| 10000 | 367 | 6 | 105.10 | 90 | 3 | 6 | 13.72 |
| 9000 | 330 | 12 | 27.39 | 80 | 2 | 18 | 86.86 |
| 8000 | 293 | 17 | 61.68 | 70 | 2 | 11 | 48.00 |
| 7000 | 257 | 2 | 95.97 | 60 | 2 | 4 | 9.14 |
| 6000 | 220 | 8 | 18.26 | 50 | 1 | 16 | 82.29 |
| 5000 | 183 | 13 | 52.55 | 40 | 1 | 9 | 43.43 |
| 4000 | 146 | 18 | 86.84 | 30 | 1 | 2 | 4.57 |
| 3000 | 110 | 4 | 9.13 | 20 | 0 | 14 | 77.71 |
| 2000 | 73 | 9 | 43.42 | 10 | 0 | 7 | 38.85 |
| 1000 | 36 | 14 | 77.71 | 9 | 0 | 6 | 68.57 |
| 900 | 33 | 1 | 25.13 | 8 | 0 | 5 | 98.28 |
| 800 | 29 | 7 | 84.56 | 7 | 0 | 5 | 16.00 |
| 700 | 25 | 14 | 31.99 | 6 | 0 | 4 | 42.11 |
| 600 | 22 | 0 | 91.42 | 5 | 0 | 3 | 75.42 |
| 500 | 18 | 7 | 38.85 | 4 | 0 | 2 | 105.14 |
| 400 | 14 | 13 | 98.28 | 3 | 0 | 2 | 21.65 |
| 300 | 11 | 0 | 45.71 | 2 | 0 | 1 | 52.57 |
| 200 | 7 | 6 | 105.14 | 1 | 0 | 0 | 82.28 |

TABLE *for converting Avoirdupois weights into British Indian weights.*

| Tons. | Mans or Bázár Maunds. | | | Cwts. | Mans or Bázár Maunds. | | | Lbs. | Mans or Bázár Maunds. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | mns. | sr. | chhat. | | mns. | sr. | chhat. | | mns. | sr. | chhat. |
| 100 | 2722 | 10 | 10 | 19 | 25 | 34 | $7\frac{2}{5}$ | 100 | 1 | 8 | $9\frac{2}{4}$ |
| 90 | 2450 | 1 | 9 | 18 | 24 | 20 | $0\frac{1}{4}$ | 90 | 1 | 3 | $12\frac{1}{4}$ |
| 80 | 2177 | 32 | 8 | 17 | 23 | 5 | $9\frac{1}{8}$ | 80 | 0 | 38 | $14\frac{1}{4}$ |
| 70 | 1905 | 23 | 7 | 16 | 21 | 31 | 2 | 70 | 0 | 34 | 0 |
| 60 | 1633 | 14 | 6 | 15 | 20 | 16 | $10\frac{7}{8}$ | 60 | 0 | 29 | $2\frac{1}{2}$ |
| 50 | 1361 | 5 | 5 | 14 | 19 | 2 | $3\frac{2}{4}$ | 50 | 0 | 24 | $4\frac{2}{4}$ |
| 40 | 1088 | 36 | 4 | 13 | 17 | 27 | $12\frac{5}{8}$ | 40 | 0 | 19 | 7 |
| 30 | 816 | 27 | 3 | 12 | 16 | 13 | $5\frac{1}{2}$ | 30 | 0 | 14 | $9\frac{1}{4}$ |
| 20 | 544 | 18 | 2 | 11 | 14 | 38 | $14\frac{3}{8}$ | 20 | 0 | 9 | $11\frac{1}{2}$ |
| 10 | 272 | 9 | 1 | 10 | 13 | 24 | $7\frac{1}{4}$ | 10 | 0 | 4 | $13\frac{2}{4}$ |
| 9 | 245 | 0 | $2\frac{1}{2}$ | 9 | 12 | 10 | $0\frac{1}{8}$ | 9 | 0 | 4 | 6 |
| 8 | 217 | 31 | 4 | 8 | 10 | 35 | 9 | 8 | 0 | 3 | $14\frac{1}{4}$ |
| 7 | 190 | 22 | $5\frac{1}{2}$ | 7 | 9 | 21 | $1\frac{7}{8}$ | 7 | 0 | 3 | $6\frac{1}{4}$ |
| 6 | 163 | 13 | 7 | 6 | 8 | 6 | $10\frac{3}{4}$ | 6 | 0 | 2 | $14\frac{1}{2}$ |
| 5 | 136 | 4 | $8\frac{1}{8}$ | 5 | 6 | 32 | $3\frac{5}{8}$ | 5 | 0 | 2 | 7 |
| 4 | 108 | 35 | 10 | 4 | 5 | 17 | $12\frac{1}{2}$ | 4 | 0 | 1 | $15\frac{1}{4}$ |
| 3 | 81 | 26 | $11\frac{1}{2}$ | 3 | 4 | 3 | $5\frac{3}{4}$ | 3 | 0 | 1 | $7\frac{1}{4}$ |
| 2 | 54 | 17 | 13 | 2 | 2 | 28 | $14\frac{1}{4}$ | 2 | 0 | 0 | $15\frac{1}{2}$ |
| 1 | 27 | 8 | $14\frac{1}{2}$ | 1 | 1 | 14 | $7\frac{1}{8}$ | 1 | 0 | 0 | $7\frac{3}{4}$ |

The British Indian system of weights having been ordered by Regulation VII. of 1833, to supersede the bázár weights previously used, (of which the unit was the old Murshidábád rupee weight of 179.666 troy grains, called the sikká weight), in all Government transactions, a corresponding adjustment was made of all the weights in use at the several Government offices of the metropolis—the custom-house, the mint, the treasury, the bank, and the police; and sets of standard ser and tolá weights of brass were ordered to be prepared at the mint for distribution to all the collectors' offices of the Bengal presidency.

The Regulation in question expressly avoided enforcing the change by any penal enactment, trusting that the sense of public convenience would quickly ensure its substitution for the irregular system now prevalent; and directing only that the verification and adjustment of all weights at the Calcutta and Ságar assay offices, should be made for the future in accordance with the new scale.

In the ordinary dealings of commerce, the difference between the bázár weights and the new weights is not recognizable: indeed the error of single large weights is generally found to exceed the amount of modification now introduced: no inconvenience therefore remains from the still general use of the old bázár weights, while the principal European mercantile establishments of the town, as well as all the native bullion merchants, have already had their weights adjusted to the new system.

Where it may be required, however, to know the precise difference between the old and new system, recourse may be had to the following table. The new *man* will be seen to be one chhaták and a quarter, nearly, heavier than the old bázár man: which would induce an increase in the price of articles to the trifling extent of one-fifth per cent. or three ánás in a hundred rupees.

TABLE *for the mutual conversion of Tolás and old Sikká Weight of Bengal.*

| Old Sikká Weight into Tolás. | | | | Tolás into Sikká Weight. | | | |
|---|---|---|---|---|---|---|---|
| Old Sikká Weight. | Tolás. | Old Sikká Weight. | Tolás. | Tolás. | Old Sikká Weight. | Tolás. | Old Sikká Weight. |
| 3200 | 3194.060 | 800 | 798.515 | 3200 | 3205.948 | 800 | 801.487 |
| 1600 | 1597.030 | 700 | 698.700 | 1600 | 1602.974 | 700 | 701.301 |
| 1500 | 1497.216 | 600 | 598.886 | 1500 | 1502.789 | 600 | 601.115 |
| 1400 | 1397.401 | 500 | 499.072 | 1400 | 1402.604 | 500 | 500.929 |
| 1300 | 1297.587 | 400 | 399.257 | 1300 | 1302.419 | 400 | 400.734 |
| 1200 | 1197.772 | 300 | 299.443 | 1200 | 1202.220 | 300 | 300.557 |
| 1100 | 1097.958 | 200 | 199.628 | 1100 | 1102.044 | 200 | 200.371 |
| 1000 | 998.144 | 100 | 99.814 | 1000 | 1001.859 | 100 | 100.185 |
| 900 | 898.329 | 1 ánā | 0.062 | 900 | 901.673 | 1 másha. | 0.084 |

This table will answer equally well for the conversion of old bázár mans or sers into new mans and sers, the ratio being the same, namely, as 180 : 179.666.

### FACTORY WEIGHTS.

There is another species of weight employed in some branches of the commerce of Calcutta which it will be necessary to expel before uniformity can be established. This is the system of factory weights originally used by 'the English factory at Bengal,' and now generally retained in the commercial transactions of the Government, although long since superseded in their customs and revenue business by the bázár weights.

It would appear to have been adopted in 1787 to save calculation in the home remittances of produce, three factory mans being almost exactly equal to two hundred-weight avoirdupois.

A moment's inspection of the Calcutta price-current will be sufficient to prove the great inconvenience which the retention of the two-fold system must cause. Some articles are quoted at 'sikká rupees per bázár man,' others at 'sikká rupees per factory man,' and others again at 'current rupees per factory man,' the current rupee being an imaginary money, of which 116 are assumed as equal to 100 sikkás?

To increase the perplexity, the same article is often estimated in a different scale as it comes from different places; thus, Radnagor and Bauleah silk are sold per bázár ser: while Kasimbázár and Gonatea silk are sold per factory ser. Tin, iron, verdigris, Japan and English copper, per 'sikká rupees and factory man:'—steel, zinc, lead, mercury, and South American copper, per current rupees and factory man!—Gum-Benjamin is sold by factory, all other gums by bázár, weight:—stick-lac by the former, but shell-lac and lac dye by the latter!

Many more examples might be furnished of similar inconsistency. Saltpetre, indigo, silk the produce of the Straits, and metals, are the principal articles sold by the factory maund; while grain, sugar, cotton, most articles of food, and all of retail bázár consumption, are sold by the bázár weight.

The old bázár maund was defined to be ten per cent. heavier than the factory maund; therefore the latter will be equal to 74 lbs. 10 oz. 10.666 dr. avoirdupois; the ser to 1 lb. 33 oz. 13.866 dr.; and the chhaták to 1 oz. 13.366 dr.

From the simple relation of the factory to the bázár weight, there can be no difficulty whatever in substituting the latter in its place, in the valuation of such articles of commerce as are still estimated by the former:—nothing more being necessary than to add ten per cent. to the prices formerly quoted per factory maund. Thus, indigo sold at 100

or 200 rupees per factory maund, will now be 110 or 220 rupees per man, and so of other goods. As such goods are invariably weighed at the custom-house on the new system, and the duty or drawback calculated accordingly, it is only a source of perplexity to buy and sell by the obsolete weight; and to retain two species of weights in a warehouse, must obviously open the door to continual mistakes, if not occasionally even to fraudulent interchange.

The following Table gives the conversion of factory weights into new mans accurately, but in ordinary practice the following simple rules will suffice.

I. Deduct one-eleventh from the weight in factory maunds, sers, or chhatáks; the result will be the weight in British Indian (or bázár) mans, sers, and chhatáks.

II. Add ten per cent. to the price per factory maund, etc., the result will be the price per British Indian (or bázár) man, etc.

The reverse table has not been calculated, because, it is to be hoped, it will never be required.

TABLE *for the conversion of Bengal Factory weights into new standard mans and decimals.*

| Factory weights, mans. | New man. | Factory weights. | | New man. |
|---|---|---|---|---|
| 10000 | 9074.400 | mans. | 5 | 4.537 |
| 1000 | 907.440 | | 4 | 3.630 |
| 100 | 90.744 | | 3 | 2.722 |
| 90 | 81.669 | | 2 | 1.815 |
| 80 | 72.595 | | 1 | 0.907 |
| 70 | 63.520 | sers. | 20 | 0.453 |
| 60 | 54.446 | | 10 | 0.227 |
| 50 | 45.372 | | 5 | 0.113 |
| 40 | 36.297 | | 4 | 0.091 |
| 30 | 27.223 | | 3 | 0.068 |
| 20 | 18.149 | | 2 | 0.045 |
| 10 | 9.074 | | 1 | 0.023 |
| 9 | 8.167 | chhatáks. | 8 | 0.011 |
| 8 | 7.259 | | 4 | 0.005 |
| 7 | 6.352 | | 2 | 0.003 |
| 6 | 5.444 | | 1 | 0.001 |

(To reduce the decimals into sers and hundredths, multiply by 4, and move the decimal point one place to the right: to convert the hundredths into chhatáks, multiply by 16 and divide by 100.)

CURRENT RUPEE PRICES.

By a fortunate chance we are able to meet the apparently perplexing practice of estimating the values of some articles in 'current rupees per factory weight,' with a very simple method of expressing their equivalents according to the new system, so as to obviate any supposed

difficulty in eradicating long established habits: for 100 current rupees being equal to $\frac{10000}{116}$ or 86.207 sikká rupees, and one factory man being equal to .90744 man, as above stated; the ratio of the two modes of valuation will be as 100 to 86.207 ÷ .90744, or 95 exactly. Hence may be deduced the following simple rules:—

I. Deduct five per cent. from the price or value quoted in 'current rupees per factory weight,' and the result will be its equivalent in sikká rupees per bázár (or new) weight.'

II. Add one and a third per cent. to the price or value quoted in 'current rupees per factory weight,' and the result will be its equivalent in Farrukhábád, Madras, or Bombay rupees, per bázár (or new) weight.

The following table is constructed on this principle, and is applicable to mans, sers, and chhatáks, as the case may be:

TABLE *for the conversion of values quoted in current rupees per factory maund, ser, or chhaták into their equivalents in sikká or Farrukhábád rupees per new standard (or bázár) weights.*

| Current rupees per factory man, etc. | Sikká rupees per new man, etc. | Fd. Mad. Bom. Rs. per new man, etc. | Current ánás per factory man, ser, etc. | Decimals of sikká rs. per new man, etc. | Decimals of Fd. Mad. Bom. rs. per new man, ser, etc. |
|---|---|---|---|---|---|
| 1000 | 950. | 1013.333 | 15 | 0.891 | 0.950 |
| 100 | 95. | 101.333 | 14 | .831 | .886 |
| 90 | 85.5 | 91.200 | 13 | .772 | .823 |
| 80 | 76. | 81.066 | 12 | .7125 | .760 |
| 70 | 66.5 | 70.933 | 11 | .653 | .696 |
| 60 | 57. | 60.800 | 10 | .594 | .633 |
| 50 | 47.5 | 50.666 | 9 | .534 | .570 |
| 40 | 38. | 40.533 | 8 | .475 | .506 |
| 30 | 28.5 | 30.400 | 7 | .416 | .443 |
| 20 | 19. | 20.266 | 6 | .356 | .380 |
| 10 | 9.5 | 10.133 | 5 | .297 | .316 |
| 5 | 4.75 | 5.066 | 4 | .2375 | .253 |
| 3 | 2.85 | 3.040 | 3 | .178 | .190 |
| 2 | 1.90 | 2.026 | 2 | .119 | .126 |
| 1 | 0.95 | 1.013 | 1 | .059 | .063 |

(To reduce the decimals into ánás and pá'is, see Table p. 12.)

The only other denomination used extensively at the Presidency is the salt man, which is $2\frac{1}{2}$ per cent. heavier than the bázár man, having 82 tolás to the ser. It is much to be regretted that this absurd weight should not only have been retained, but that after the promulgation of the new regulation, the Government ordered a completely new and expensive series of brass weights to be made up for the Salt Board, at considerable cost, on the old system! It would of course have been just as simple to order the weighments of salt to be made

with the new *man*, and 2½ per cent. surplus to be levied on the gross amount to cover wastage; the weights would then have been convertible to general use, whereas now they are confined to one specific purpose.

In the Madras and Bombay Presidencies, the weights of commerce have been long since made to conform with the avoirdupois system, by assuming the nearest approximation in pounds to the local *man*, and adjusting the latter to it. Thus at Madras the 'man' is assumed as equal to 25lbs. avoirdupois: and at Bombay the more convenient equivalent of 28lbs., or one quarter cwt., has been adopted for the standard man. As these weights (especially the latter) are convenient by their direct relation to the commercial unit of England, it is neither to be expected nor to be wished that they should be exchanged for the weights of Bengal. Indeed, it should be remembered, that the use of purely English weights, even in Calcutta counting-houses, can lead to no confusion:—it is the introduction of a fictitious native weight, like the factory man, that is objectionable, as being neither Indian nor English.

The ser at Madras contains 8 paláms[1] of 10 pagodas each, so that, like that of Bengal, it has the the sub-division into 80 parts. In the Malabar system, also used at Madras, 2½ paláms (fanams) make a ser, and the tolá occupies the place of the man; it is equal to 23.192lbs.

The ser at Bombay is divided into 30 pá'ís, or 72 tánks,[2] or 72 troy grains each.

The conversion of the Madras and Bombay mans into the bázár man of Bengal requires another table. A practical estimate of their relative values may, however, be held in the memory by means of the following simple ratios:—

Ten Madras mans = 3 mans, 1½ sers, Bengal, nearly.
Three Bombay mans = 1 man, 1 ser, nearly.

The exact ratios between the cwt. and the man given in page 100, are of course applicable to the derivatives of the avoirdupois pound in the other Presidencies.[3]

[1] [Generally, though corruptly, written 'pollam *or* pullam.' TAM. from S. पल.]

[2] [S. टंक *ṭank*, MAR. टंक, टांक *ṭank* or *ṭánk*.]

[3] The readiest practical method of reducing the Indian to the English system, where the utmost accuracy is not required, is derived from the equation, 300 mans = 11 tons. Hence we have the following rules in addition to those given in page 100:—

III. Add a tenth to a sum of mans, and divide by 30 results—the weight in tons.

IV. Multiply a sum in tons by 30, and deduct an eleventh from the product: results—its value in mans.

V. Deduct one-third from a weight in mans, and increase the remainder by one-tenth: results—the weight in cwts. nearly.

VI. Add one-half to a given weight in cwts., and diminish the sum by one eleventh: results—the equivalent in mans, nearly.

For the more exact conversion of one denomination into the other, the following table may be consulted:

TABLE *for the mutual Conversion of Bengal, Madras, and Bombay mans.*

| Bengal mans. | Madras mans. | Bombay mans. | Madras mans. | Bengal mans. | Bombay mans. | Bengal mans. |
|---|---|---|---|---|---|---|
| 1000 | 3291.428 | 2938.775 | 1000 | 303.820 | 1000 | 340.278 |
| 100 | 329.143 | 293.877 | 100 | 30.382 | 100 | 34.028 |
| 90 | 296.229 | 264.492 | 90 | 27.344 | 90 | 30.625 |
| 80 | 263.315 | 235.104 | 80 | 24.306 | 80 | 27.222 |
| 70 | 230.401 | 205.716 | 70 | 21.268 | 70 | 23.819 |
| 60 | 197.487 | 176.328 | 60 | 18.230 | 60 | 20.416 |
| 50 | 164.571 | 146.938 | 50 | 15.191 | 50 | 17.014 |
| 40 | 131.656 | 117.552 | 40 | 12.152 | 40 | 13.612 |
| 30 | 98.742 | 88.164 | 30 | 9.114 | 30 | 10.209 |
| 20 | 65.828 | 58.775 | 20 | 6.076 | 20 | 6.806 |
| 10 | 32.914 | 29.388 | 10 | 3.038 | 10 | 3.403 |
| 1 | 3.291 | 2.939 | 1 | 0.304 | 1 | 0.340 |
| sers, 30 | 2.469 | 2.203 | sers, 30 | 0.228 | sers, 30 | 0.255 |
| 20 | 1.646 | 1.469 | 20 | 0.152 | 20 | 0.170 |
| 10 | 0.823 | 0.734 | 10 | 0.076 | 10 | 0.085 |
| 5 | 0.411 | 0.367 | 5 | 0.038 | 5 | 0.042 |
| 4 | 0.329 | 0.294 | 4 | 0.030 | 4 | 0.034 |
| 3 | 0.240 | 0.220 | 3 | 0.022 | 3 | 0.025 |
| 2 | 0.164 | 0.147 | 2 | 0.015 | 2 | 0.017 |
| 1 | 0.082 | 0.073 | 1 | 0.008 | 1 | 0.008 |

The next table will be found very convenient for reducing the decimals of mans in the foregoing, and upon all other occasions, into the ordinary divisions of the native weights, viz., sers and chhatáks.

TABLE *for converting sers and chhatáks into decimals of a* man, *and* vice versâ.

| Chhtk. | Decimals for | | | | Sers. | Decimals. |
|---|---|---|---|---|---|---|
| | 0 ser. | 1 ser. | 2 sers. | 3 sers. | | |
| 0 | .0000 | .0250 | .0500 | .0750 | 4 | .0000 |
| 1 | .0016 | .0266 | .0516 | .0766 | 8 | .2000 |
| 2 | .0031 | .0281 | .0531 | .0781 | 12 | .3000 |
| 3 | .0047 | .0297 | .0547 | .0797 | 16 | .4000 |
| 4 | .0062 | .0312 | .0562 | .0812 | 20 | .5000 |
| 5 | .0078 | .0328 | .0578 | .0828 | 24 | .6000 |
| 6 | .0094 | .0344 | .0594 | .0844 | 28 | .7000 |
| 7 | .0109 | .0359 | .0607 | .0829 | 32 | .8000 |
| 8 | .0125 | .0375 | .0625 | .0875 | 36 | .9000 |
| 9 | .0141 | .0391 | .0641 | .0891 | 40 | .10000 |
| 10 | .0156 | .0406 | .0656 | .0906 | | |
| 11 | .0172 | .0422 | .0672 | .0922 | | |
| 12 | .0187 | .0437 | .0687 | .0937 | | |
| 13 | .0203 | .0453 | .0703 | .0953 | | |
| 14 | .0219 | .0469 | .0719 | .0969 | | |
| 15 | .0234 | .0484 | .0734 | .0984 | | |

The three last figures of decimals recurring in the same order after every four sers, it is unnecessary to insert them at length.

## GENERAL TABLE OF INDIAN WEIGHTS.

However desirable it may be, in theory, to reduce the system of weights throughout the vast continent of India to order and uniformity; in practice, it is well known that insuperable difficulties oppose the execution of such a project: if ever effected, it can only be done in the gradual progress of time, by the spread of knowledge, and by the growing inter-communion of the multitudes engaged in the internal traffic of the country, who would by degrees feel the advantage of uniformity in their dealings.

It is a comparatively easy thing for a government, having the sole issue of coin within its own territories, to fix upon a convenient unit of value, and establish it to the supersession of former currencies; but the weights of a country do not so immediately come in contact with the ruling power (even though it have a commercial character itself:) not at least as regards the domestic or market weights, which are localised in a thousand distinct foci under as many modifications of prices, customs, and modes of calculation and sub-division.

It is but lately that the Legislature has attempted to equalise the weights of England, and then only by the retention of a double system. India does, however, in some respects, offer a better chance of success than the countries of Europe, where each locality has, by municipal laws, rendered permanent and cognate its own system, however differing from that of its neighbour. Here, all is vague—the standards of reference being in most cases the local rupee or copper coin, themselves subject to variation; or of modern introduction, and capable of equalisation.

Thus, throughout the Maráthí states, the ser is referred to the Puna or Ankusí rupee: in Gujarát, to the Baroch rupee: in Ajmír, to the Sálimsáhí; in Bengal, to the old Murshidábád rupee; all comparatively modern. In Madras, the coin of that presidency, or of Mysore, or Pondicherry, are appealed to; but more generally the English avoirdupois unit has become familiarised, as has been already stated, by the adoption of 25 lbs., to represent the commercial 'man.'

By perseverance, therefore, in upholding one common system for the whole of British India, or at least for the Bengal presidency, a system founded on the previous habits and institutions of the country; by connecting it (as has been done) with a rupee of general, and to be hereafter exclusive, circulation; by restricting Government transactions to this system, and affording facilities of adjustment by depositing standard weights in public offices all over the country;—there is some reason to hope that, eventually, the incongruous mass now prevalent

will gradually give place to the convenience of an universal and single species of weight.

There is another argument in favour of its feasibility, namely, that India does not, properly speaking, possess dry or liquid measures. Where these are employed, they depend upon, and in fact represent the ser or the man weight; the mention of measures has been accordingly omitted in the foregoing scheme for Bengal, leaving the value of any vessel of capacity to rest solely on the weight contained in it.

The mode in which this is effected for the 'dry measures' of South and West India is, by taking an equal mixture of the principal grains, and forming a vessel to hold a given weight thereof, so as to obtain an average measure. Sometimes salt is included among the ingredients.[1] Trichinopoly is the only place where grain is said never to be sold by weight. The markál[2] and para[3] are the commonest measures; the latter is known throughout India; in Calcutta it is called 'ferrah,' and is used in measuring lime, etc. which is still recorded however in mans weight.

Of the origin or antiquity of the Indian weights it would be out of place here to institute an inquiry; the ancient metrology of the Hindús has been fully described by Mr. Colebrooke, in the 'Asiatic Researches,' v. As with the coins, so with the weights, Southern India retained most of the names and terms properly Hindú, *pala*,[4] *tulá*, *vísa*,[5] *bhárá*,[6] *khárí*[7] *(? khaṇḍí)*, *báha*. Throughout the Moghul empire, on the contrary, the ser and man were predominant. The word 'man,' of Arabic or Hebrew origin,[8] is used throughout Persia and Northern India; but, as might be expected, it represents very different values in different places: thus the *man* of Tabríz is only 6⅓ lbs. avoir., while that of Palloda, in Ahmadnagar, is 163¼ lbs.

It is probable that the ser, a Hindú weight (seṭak), was more uniform than the man, since it was founded upon the tolá (tolaká), which, with its subdivision, the *wasa*, must in very ancient times have been extensively known throughout commercial Asia. There can be little doubt that the 'tale *or* tael' and 'mace' of the Chinese are identical in origin. The variations of these weights may have been smaller, because their use was nearly confined to the precious metals and other

1 "In Belary this is called the *nou-danium* measurement; from the 'nine' sorts of grain used: rice, wheat, coolty, pasaloo, mernoomooloo, oil seeds, Bengal grain, aunnomooloo, and nooloo. In Darwar, they take, wheat, toor, hurburr, roolthee, moony, oored, juwaree, paddy, and mudkee."—Kelly's 'Metrology.'

2 [Properly *Marakkál*, from the Tamil.]

3 [MAL. *Para*.]

4 [S. पल H. پل. 5 H. تلا. S. तुला. 6 H. بهار, بهارا S. भार. 7 S. खारी.]

8 The Hebrew maneh was equal to 13110 grs. tr. or 72.83 tolás. The Greek mina to 6244 grs. or 33.57 tolás.

articles of value; the ser is quoted at the highest denomination of this class of weights in one Sanskrit work. For gross produce a greater latitude was required, and larger sers were introduced to suit the value of each article; the weight apparently, rather than the price, being made variable: while to prevent the ambiguity which might follow, it became necessary to define the ser employed as of 30, 40, 60, 72, 80, 90, or even as far as 120 tolás; and probably when the current coin began to vary from the original tolá, the mention of this weight became obsolete, and reference was made direct to the rupees of the local currency. It is to meet this mode of expression that, in the following table, the value of every ser has been given in the standard tolá of 180 grains.

The *man* of India may, as a genus, be divided into four different species: 1. That of Bengal, containing 40 sers, and averaging about 80 lbs. avoir. 2. That of Central India (Málwá, Ajmír, etc.,) generally equal to 40 lbs. avoir. and containing 20 sers, so that the ser of this large portion of the continent assimilates to that of Bengal. 3. The *man* of Gujarát and Bombay, equal to $\frac{1}{4}$ cwt. or 28 lbs. and divided into 40 sers of a smaller grade. 4. The *man* of Southern India, fixed by the Madras Government at 25 lbs. avoir. There are however many other varieties of mans, from 15 to 64 sers in weight, which it is unnecessary to particularise.

Abú'l-Fazl defines the man of Akbar's reign to be 40 sers of 30 dáms; each dám being five tánks. The tánk is in another place described as 24 ratís: the másha of eight ratís has been assumed, from the weight of Akbar's coins, to be 15.5 grs. troy. This would make the emperor's man=34 $\frac{3}{4}$ lbs. av., agreeing pretty well with that of Central and Western India. The tánk, as now existing in Bombay, is 72 grains; in Dharwár it is 50 grains; in Ahmadnagar, 268 grains. Its present weight consequently affords no clue for the verification of the above estimate, however desirable it may be to determine the point. In one part of the 'Ayín-i Akbarí,' the dám is called 20 máshas, 7 ratís, which would increase the man to about 47 lbs. In the absence of better evidence, it may be safe to reckon it in round terms at one-half of our present standard man.

### ORIGIN OF THE PRESENT TABLE OF INDIAN WEIGHTS.

In 1821, the Court of Directors called upon their commercial agents, collectors of customs, and other public officers of the three Presidencies, to procure and forward to England accurate counterparts of the standard weights and measures in use throughout their territories in the East. The order was promptly obeyed, and the

required models sent home, with certificates and explanations. The packages as they arrived were placed under charge of Dr. Kelly, who was assisted in his examination and comparison of the weights by Mr. Bingley, Assaymaster, and of the measures by Mr. Troughton, both of whom had zealously co-operated in comparing the standards sent to the English Government from other parts of the world.

The dispatches accompanying the standards from India contained full information on the money and trade, as well as on the metrology of most places: this is embodied at length in the supplement to Kelly's 'Cambist," whence it was subsequently collected in an octavo volume, entitled Kelly's 'Oriental Metrology.'

It is from these sources that the accompanying table has been drawn up, exhibiting in an abridged form the principal commercial weights of India and Asia. Most of the subdivisions peculiar to each place have been necessarily omitted for want of space, but, where possible, the formation of the ser, etc., from the local unit is mentioned. It may be generally assumed that the *man* system follows the common scale, viz.:

16 chhatáks = 1 ser.
40 sers = 1 man.
20 mans = 1 khandí[1] or máni.

The use of a five ser weight also universally prevails under the name of Panserí,[2] dharí,[3] or vísa.[4] The *dharí* from its name, however, seems to be properly a measure, and accordingly, while in Málwá it is equal to 5 sers, in other places it is found of 4, 4½, 5¾, 10, 11, and 12 sers. The terms adholá, adheli,[5] 'half,' páo,[6] powah, 'quarter,' adhpáo 'half-quarter,' frequently occur: they explain themselves.

The only novelty in the present table is the insertion of the two last columns, expressing the equivalents of the local weights in the standard man and tolá of the British Indian system. The column containing their values in avoirdupois pounds, ounces, and drams is according to the London determinations of Kelly.

Where the ser only of any place is mentioned in the first columns, the value of the man of the same place, expressed in parts of the standard man, is inclosed in parentheses to prevent mistakes: it may be remarked that the ratio of the man will answer equally well for the

[1] [From s. खण्ड *khaṇḍa*: it is commonly written 'candy.']
[2] Written *punchserree, punchser*, and *punchaseer in* KELLY.
[3] [H. دهڑي *dharí.*] Written *dhuree, dhurra, dhuddee, dudda, dhadium*, in KELLY.
[4] Written *vis, viss, visay, vesey, biss*, in KELLY.
[5] H. ادهيلي [6] H. پاو

ser, it being understood that the subdivision into 40 sers holds for the mans of the two places compared. To reduce any local weight into the standard denomination, or into the bazár man of Calcutta, nothing more is necessary than to multiply by the number in the last column, and convert the decimals into sers, if so required, by means of the second table in page 108.

The column of 'tolás per ser' will best express to a native the value of the weights of any particular locality; being the customary mode of estimation throughout the country.

In expressing the dimensions of the markál, the parra, and a few other dry or liquid measures; sometimes gallons and sometimes cubic inches have been introduced by Kelly. It may be convenient, therefore, to explain that, by the enactment of the 1st January, 1826, one imperial measure was established as a substitute for the variable wine, ale, and corn gallons of England, with their multiples and divisions.

This imperial gallon was made to contain 10 lbs. avoirdupois weight of distilled water, weighed in air at the temperature of 62° Far., the barometer standing at 30 inches. It has a capacity, therefore, of 277.274 cubic inches. Some of the most useful derivatives of this unit are here subjoined for the sake of reference.

| Imperial dry and liquid measures. | Cubic contents. | Avoirdupois weight. | Indian weights. |
|---|---|---|---|
| 1 pint, ..... ..... ..... ... | 34.659 c. i. | 1 lb. 4 oz. | 48.611 tolás. |
| 2 = 1 quart, ..... ..... ... | 69.318 „ | 2 lbs.8 „ | 97.222 „ |
| 8 = 4 = 1 gallon, ..... ... | 277.274 „ | 10 lbs. | 4.861 ser. |
| 64 = 32 = 8 = 1 = 1 bushel, ... | 1.284 c. f. | 80 „ | 38.888 „ |
| 512 = 256 = 64 = 8 = 1 quarter, ... | 10,269 „ | 640 „ | 7.777 man. |
| 2048 = 1024 = 256 = 32 = 1 chaldron | 41,075 „ | 2560 „ | 31.111 „ |

The old wine gallon contained 231 cub. inches; the ale gallon 282 c. i., and the corn gallon 268.8 c. i.; whence are obtained the following multipliers to convert them into imperial measure, viz., .833, 1.017 and .969 respectively.

It will be remarked that the gallon nearly corresponds with the panserí or dharí of the Indian corn measures, while the bushel bears the same proximity to the man weight. Standards of the bushel, gallon, quart, and pint, are deposited in the Assay-offices of the three Presidencies.

The following is the scale of measures in use at Madras:—

| | | cub. inches. | |
|---|---|---|---|
| | 1 walak,[1] = | 11.719. | |
| 8 walaks, | = 1 paḍi, = | 93.752. | |
| 8 paḍis[2] | = 1 markál,[3] = | .750 | = 27 lbs. 2 oz. 2 dr. water. |
| 5 markáls, | = 1 parra, = | 3,750. | |
| 400 parras[4] | = 1 garce[5] = | 300,000. | |

The particulars of the Dry Measure of Ceylon are thus given in the 'Oriental Metrology.'

| | | gallons. | inch. | inch. |
|---|---|---|---|---|
| 4 cutchundoos, | = 1 ser, = | 0.24 | = 4.35 diam. + 4.35. | |
| 4.8 sers, | = 1 coornly, = | 1.15 | | |
| 2.5 goornies, | = 1 markál, = | 2.88 | | |
| 2 markáls, | = 1 parra = | 5.76 | = cube of 11.56 inches. | |
| 8 parras, | = 1 amonam, = | 46.08 | = $5\frac{3}{4}$ bushels. | |
| $9\frac{3}{8}$ amonams, | = 1 last, = | 432 | = $6\frac{3}{4}$ quarters. | |

Thus it will be seen that there is no fixed rule as to the subdivisions and multiples of the parra or markál.

[1] [ولک, vulgarly, Olluck.]

[2] [TAM. *Paḍi.*]

[3] [TAM. *Marakkál.* H. مرکال *markúl.*]

[4] [TEL. *Parra*: in page 110, note 3, incorrectly given as 'MAL. *Paṛa.*']

[5] [Properly, TEL. *Gárişa.*]

TABLE *of the Commercial weights of India, and of other trading places in Asia, compared with the British-Indian Unit of weight, and with the Avoirdupois system of England.*

| Place. | Denomination of Weight. | Value in English avoirdupois weight. lb. oz. dr. | No. of standard Tolás per ser, etc. Tolás. | Value of mans, etc. in Mans and decimals. Mans. |
|---|---|---|---|---|
| Acheen in Sumatra. | Tale, of 16 mace or 64 copangs. | grs. 148.2 | 0.790 | ... |
| | Catty = 100 tales or 20 buncals. | 2 1 14¼ | 82.370 | ... |
| | Bahar, of 200 catties. | 423 8 0 | ... | 5.1466 |
| | Bamboo, liquid measure ..... | 3 10 10 | 130.890 | ... |
| Ahmadábád in Gujarát. | Tolá = 32 válas, or 96 ratís. | grs. 193.440 | 1.075 | ... |
| | Ser (divided into ½ and ¼ s)..... | 1 0 14½ | 41.091 | ... |
| | Man, of 40 sers..... | 42 4 13 | ... | 0.5140 |
| Ahmadnagar, in Aurangábád. | Tolá = 12 máshas or 96 gunjás | grs. 188.4 | 1.047 | ... |
| | Ser, com. wt. (of 80 Ankusí rs.) | 1 15 8 | 76.562 | ... |
| | Man, of 40 sers..... | 78 15 12 | ... | 0.9599 |
| | Ser, of capacity (110 Ankusí rs.) | 2 11 6 | 105.425 | ... |
| | Man, do. = 12 pailís = 48 sers. | 130 2 0 | ... | 1.5814 |
| Amboyna, in the Moluccas. | Tale, of 16 mace. ..... | grs. 455.35 | 2.529 | ... |
| | Bahar, of cloves..... | 596 12 0 | ... | 7.2521 |
| | Coyang, of rice (2,500 catties)... | 3255 8 0 | ... | 39.5632 |
| Ahmode, Gujarát. | Man = 40 sers of 40 Baroch rs. | 40 8 12 | 39.424 | 0.4928 |
| | „ for grain = 40 sers of 41 do. | 41 9 5 | 40.416 | 0.5052 |
| | „ for cotton = 42 sers „ „ | 43 10 10 | ... | 0.5306 |
| Anjar, Bhuj. | „ of 40 sers (of 36 dokarás)... | 27 3 8 | 26.464 | 0.3308 |
| | Kalsí, measure = 64 máps. ..... | 3036l.(6c.in.) | ... | ... |
| Anjengo, Travancore, M. | Khandí ( = 35 telong[1] of 16lbs.) | 560 0 0 | ... | 6.8056 |
| | Man (20 to the khandí). ..... | 28 0 0 | ... | 0.3402 |
| Arkát, Madras. | Pakká ser,[2] of 24 paláms..... | 1 13 0 | 70.486 | (0.8811) |
| | Padí, for grain = 47 paláms. ... | 3 8 12 | 137.930 | ... |
| Aumodh, Kalpí. | Ser, for cotton (see Kalpí). ..... | 1 8 0 | 58.336 | (0.7292) |
| | „ „ grain, etc..... | 2 0 8 | 78.993 | (0.9872) |
| Aurangabander in Sindh. | Tolá = 12 máshas, or 72 ratís... | grs. 187.5 | 1.041 | ... |
| | Ser, of 64 pice. ..... | 1 13 13 | 72.461 | ... |
| | Man, of 40 sers..... | 74 10 10 | ... | (0.9074) |
| Bagulkotá, M. | Kachchá ser,[3] for groceries, oil, etc. | 0 8 3½ | 20. | (0.2488) |
| | Pakká ser, for grain (116½ c. i.) | 3 6 11½ | 133. | (1.6616) |
| Bairseah, Málwá. | Ser, of 80 Bhopál rupees..... | 1 14 13 | 73.892 | (0.9362) |
| | Man, of 40 sers. | 77 1 12 | ... | 0.9371 |
| Banda, Moluccas. | Catty, of 5⅔ lbs. Dutch. ..... | 6 1 10 | ... | 0.0740 |
| | Bahar, of 100 catties. ..... | 610 0 0 | ... | 7.4132 |
| | Soekal, of nutmegs, 28 catties... | 170 12 13 | ... | 2.0757 |
| Bangalore, in Maisúr. | Kachchá ser, of 24 rupees. ..... | 0 10 0 | 24.304 | (0.3038) |
| | „ man, of 40 sers..... | 25 0 0 | .. | 0.3038 |
| | Khandí, of 20 mans..... | 500 0 0 | ... | 6.0764 |
| | Pakká ser, for grain, 84 rupees | 2 1 10¾ | 81.840 | (1.0230) |
| | Khandí, of 20 kolagas, or 160 sers. | 336 12 4½ | ... | 4.0926 |
| | Markál, of 9, 10, 12, etc., to 96 srs. | | | |
| Banjar Massin, in Borneo I. | Tale, of 16 mace. ..... | grs. 614.4 | 3.413 | ... |
| | Pecul and catty (see China) | | | |
| | Last, grain measure = 230 ganton | 3066 10 10 | ... | 37.2685 |
| Bantam, Java. | Tale, for gold, musk, etc..... | grs. 1055 | 5.860 | ... |
| | Bahar = 3 peculs of 100 catties. | 396 0 0 | ... | 4.8124 |
| | Coyang, of rice = 200 gantams. | 8681 0 0 | ... | 105.4982 |
| Banswarra. | See Malwa. | | | |
| Bardoler, Súrat. | Man, of 39¾ sers, 2 pice. ..... | 37 4 4¾ | ... | 0.4529 |

[1] Properly, TAM. *Tulám.* [2] پکّا سیر *pakká ser,* 'a full, complete, or correct *ser.*'

[3] کچّا *kachchá,* the converse of *pakká.*

| Place. | Denomination of Weights. | Value in English avoirdupois weight. | No. of standard Tolás per ser, etc. | Value of mans, etc. in Mans, and decimals. |
|---|---|---|---|---|
| | | lb. oz. dr. | Tolás. | Mans. |
| Baroda, Barọch. | Ser, (pergunna,) 42 Bábásáhí rs. | 1 0 13.8 | 41.186 | ... |
| | Man, of 42 sers. | 44 9 10 | ... | 0.5420 |
| | Khandí, of 20 mans. | 892 1 4 | ... | 10.8411 |
| | The town ser has 41 Bábás. rs. | 1 0 9.5 | 40.286 | (0.5036) |
| | The Sesamum man is of 40 sers. | 42 7 10.8 | ... | 0.5162 |
| Batávia, Java. | Mark, of 9 reals. | grs. 422 | 2.344 | ... |
| | Bahar=3 peculs, of 100 catties. | 406 14 0 | ... | 4.9446 |
| | Coyang, of rice=3,300 lbs. Dutch | 3581 0 0 | ... | 43.5190 |
| | Timbang, of 5 peculs. | 678 2 0 | ... | 61.7133 |
| | Kanne, liquid measure. | 91 c. i. | ... | ... |
| Bauleah, Bengal. | Ser, of 80 sá. wt. or tolás. | ..... | 80. | 1.0000 |
| | Ser, of 60 sá. wt. for liquids, etc. | ..... | 60. | 0.7500 |
| Belgaum, Maráthí country. | Ser, of 24 Shápúrí rs. (174 grs.) | 0 9 8 | 23.091 | ... |
| | Man, of 44 sers. | 26 3 15 | ... | 0.3189 |
| | Tolá, of 30 Kántaráí fanams. | grs. 176.25 | 0.979 | ... |
| Bellary, Mad. Ceded Distr. | Ser, of 21 Mysore rs. or tulâms | 0 8 7¾ | 20.621 | (0.2578) |
| | Man, of 48 sers. | 25 6 0 | ... | 0.3083 |
| | Man, for cotton (=1½ naga.) | 26 5 4 | ... | 0.3199 |
| | Thimapoo, grain measure, 112 rs. | ..... | 112. | ... |
| | Markál chunám do.=12 sers. | ..... | 1008. | 0.3150 |
| Benáres. | Tolá, of 215 grains troy. | ..... | 1.194 | ... |
| | Ser, of 105 sá. wt. | 2 10 0 | 105. | 1.3125 |
| | Ser, of 103 sá. wt. | 2 9 2 | 103. | 1.2875 |
| | Ser, of 96 sá. wt. | 2 6 7 | 96. | 1.2000 |
| Bencoolen, Sum. | Tale, for gold, etc.=638 grains. | ..... | 3.940 | ... |
| | Catty, of 16 tales. | 1 7 5 | 56.666 | .. |
| Betelfaki, Arab. | Frazil, of 10 mans. | 20 6 4 | ... | 0.2477 |
| | Bahar, of 40 frazils. | 815 10 0 | ... | 9.9121 |
| Bhopál, Bhilsa. | Same as Málwá. | | | |
| Birman Empire. | See Rangoon. | | | |
| Bombay, Money weight. | Tank, of 24 ratís, (for pearls.) | grs. 72 | 0.400 | ... |
| | Tolá, (formerly 179 grs.) | grs. 180 | 1.000 | ... |
| Commercial weight. | Ser, of 30 pice or 72 tanks. | 0 11 3⅓ | 27.222 | ... |
| | Man, of 40 sers. | 28 0 0 | ... | 0.3402 |
| | Khandí, of 20 mans. | 560 0 0 | ... | 6.8056 |
| Grain measure | Ser, of 2 tipprees. | 0 11 3.2 | 24.836 | (0.3104) |
| | Para, of 16 pailís or adholís. | 44 12 12.8 | ... | 0.5444 |
| | Khandí, of 8 paras. | 358 6 4 | ... | 4.3553 |
| | Parra, salt measure, 6 gallons | 1607.6 c. i. | ... | ... |
| | Ser, for liquids, 60 Bom. rs. | 1 8 8¼ | 60. | (0.7448) |
| Borneo. | See Banjar Massin. | | | |
| Baroch, Gujarát. | Man,=40 sers, of 40 rs. | 40 8 12 | 39.408 | 0.4928 |
| | Man, for grain, 41 do. | 41 9 5 | ... | 0.5052 |
| | Man, for cotton, 42 sers. | 43 9 9½ | ... | 0.5397 |
| Bushire, Persia. | Man, Tabrízí=720 miskáls | 7 10 15 | 29.888 | 0.0934 |
| Baṣra, Arab. | Man, of 24 vakias Sophi | 116 0 0 | ... | 1.4097 |
| Baghdád, ,, | Man=6 okas of 400 dirhams. | 16 8 0 | 641.600 | 0.2005 |
| Cachar, Tonquin. | Tale, of 10 mace, or 1000 kás. | grs. 590.75 | 3.282 | ... |
| Calcutta. | (See the foregoing pages.) | lbs. 82⅖ | 80. | 1.0000 |
| | Grain weights or measures are derived from the others, thus.— | | | |
| | 1 kunkí=5 chhatáks | ..... | 25. | ... |
| | 1 raik=4 kunkís=1¼ ser. | ..... | 90. | ... |
| | 1 pallí=4 raiks=5 sers. | ..... | 400. | ... |
| | 1 soallí=20 pallís=2½ mans. | lbs. 205⅝ | 5400. | 2.500 |
| Calicut, Malabar. | Ser, of 20 Súrat rs. | 0 8 2⅔ | 19.849 | (0.2481) |
| | Man, of 68 sers. | 34 11 11 | ... | 0.4220 |

| Place. | Denomination of Weights. | Value in English avoirdupois weight. lb. | oz. | dr. | No. of standard Tolás per ser, etc. | Value of mans, etc. in Mans and decimals. |
|---|---|---|---|---|---|---|
| Cambay, Malabar. | Same as Súrat. | | | | | |
| Canton. | See China. | | | | | |
| Cape Town. | 91⅘ Dutch=100 English weight | | | | | |
| Carwar, Kanára. | Man, of 42 sers. | 26 | 0 | 0 | ... | 0.3159 |
| Ceylon. | See Colombo. | | | | | |
| Chanador, in Ahmadnagar. | Ser, of 74 Ankusí rs. 10 más. | 1 | 13 | 8 | 71.702 | (0.8963) |
| | Ser of capacity=72 tanks. | 2 | 5 | 7 | 90.995 | ... |
| | Man,=64 sers. | 149 | 12 | 0 | ... | 1.8200 |
| China. | Tale, see page 16 (=579,84 grs.) | 0 | 1 | 5½ | 3.221 | ... |
| | Catty, of 16 tale. | 1 | 5 | 5½ | 51.586 | ... |
| | Pecul, of 100 catties. | 133 | 5 | 5½ | ... | 1.4987 |
| Cochin, Malabar. | Man, of 25 lbs. of 42½ sers. | 27 | 2 | 11 | ... | 0.3301 |
| Coimbator, Mysore | Man, of 40 sers. | 24 | 1 | 0 | ... | 0.2923 |
| | Palám, (of 10 pagodas.) | grs. 528½ | | | 2.936 | ... |
| | Tolá, for cotton. | 7 | 8 | 0 | 291.666 | ... |
| Colachy, Travancore. | Man=125 palâms, of 105 grs. | 18 | 12 | 13 | ... | 0.2284 |
| | Khandí, of 20 mans. | 376 | 1 | 2 | ... | 4.5702 |
| Colombo, Ceylon. | Khandí or Bahar. | 500 | 0 | 0 | ... | 6.0764 |
| | Garce, (82 cwt. 2 qrs. 16½ lbs.) | 9256 | 8 | 0 | ... | 112.4921 |
| | Markál, dry meas.=10 sers. | galls. 2.88 | | | ... | ... |
| | Parra, do. | ,, 5.76 | | | ... | ... |
| Comercolly, Bn. | Ser, for metals, 58 sa. wt. (other sers of 60 and 78 do.) | 1 | 7 | 9 | 58. | (0.7160) |
| Coolpahar, Calp. | Ser. | 3 | 1 | 6¼ | 120.000 | (1.5000) |
| Cossimbázár, Bn. | Sers, of 76, 78, 80, and 82.10 tol. | | | | | |
| Calpí, Agra. | Ser, for sugar, metals, grain. | 2 | 1 | 15 | 82.487 | (1.0310) |
| | Ser, for ghí. | 2 | 6 | 3 | 92.816 | (1.1602) |
| | Ser, for cotton. | 2 | 6 | 12 | 94.184 | (1.1778) |
| | Ser, for grain, wholesale. | 2 | 7 | 5 | 95.552 | (1.1944) |
| Dharwár, Bom. | Kachchá ser, of 72 tanks. | 0 | 8 | 3½ | 20.0 | (0.2488) |
| | Pakká ser=116 Mad. rs. | 2 | 15 | 11½ | 116.0 | (1.4488) |
| | Dharâ, liquid measure, 12 sers. | | | | | |
| Dewas, Malwa. | Ser, of 80 Ujjain rupees. | 1 | 15 | 10 | 76.866 | ... |
| | Man, of 64 sers. | 137 | 8 | 2 | ... | 1.6712 |
| Dindor, Ahmad. | Ser, of 76 Ankusí rs. | 1 | 13 | 15 | 72.765 | (0.9096) |
| | Ser, of capacity, 72 tanks | 2 | 7 | 6½ | 95.778 | ... |
| | Man, of 64 sers. | 157 | 10 | 0 | ... | 1.9136 |
| Dungurpur. | Ser, of 52 Sálimaní rs. | 1 | 4 | 0¾ | 48.725 | (0.6090) |
| | Man, of 40 sers. | 50 | 1 | 14 | ... | 0.6090 |
| Dakhan, Puna. | Ser, 72 tanks or tolás (80 Ank. rs.) | 1 | 15 | 8½ | 76.638 | ... |
| | Man, of 12½ sers, for ghí, etc. | 24 | 10 | 4½ | ... | 0.2994 |
| | Man, of 14 ,, for metals. | 27 | 9 | 9 | ... | 0.3353 |
| | Pala of 12½ ,, for iron, etc. | 236 | 9 | 2 | ... | 2.8749 |
| | Man, of 48 ,, for grain. | 94 | 9 | 8 | ... | 1.1494 |
| Faifoe, Coc. Chi. | Same as in China. | | | | | |
| Farrukhábád, Agra. | Ser, wholesale 110 sá. wt. ? [1] | ..... | | | 110. | (1.3625) |
| | ,, retail 94 ,, ? | ..... | | | 94. | (1.1750) |
| | ,, for spice, 82. | ..... | | | 82. | (1.0250) |
| Geroulí, Kalpí. | Ser, for all purposes | 1 | 15 | 0¾ | 75.460 | (0.9431) |
| Ghouhon, ,, | Ser, for wholesale | 2 | 2 | 0 | 82.638 | (1.0330) |
| Goa, Malabar. | Quintal, of 4 arobas. | 129 | 5 | 5 | ... | (1.5717) |
| | Khandí, of 20 mans. | 495 | 0 | 0 | ... | 6.0156 |
| Gamron, Persia. | Man, Tabrí. (Tabrízí ?) | 6 | 12 | 0 | 262.400 | 0.0820 |
| | Man, Sháhí (=2 Tabrízí) | 13 | 8 | 0 | 524.800 | 0.1640 |

[1] These are marked in Kelly 11 and 14 Farrukhábád sikká weight, which must be a mistake for 110, and, probably, 94.

| Place. | Denomination of Weights. | Value in English avoirdupois weight. lb. | oz. | dr. | No. of standard Tolás per ser, etc. | Value of mans, etc. in Mans and decimals. |
|---|---|---|---|---|---|---|
| | | | | | Tolás. | Mans. |
| Gamron, Persia. | Man, Copra, for provisions ..... | 7 | 12 | 0 | 301.440 | 0.0942 |
| Hansut, Barôch. | Market ser, of 38 Baroach rs.... | 0 | 15 | 7 | 37.521 | (0.4690) |
| | ,, man, of 40 sers..... | 38 | 9 | 9 | ... | 0.4690 |
| | Oil man, of 42 sers..... | 40 | 8 | 6 | ... | 0.4925 |
| | Pergunna ser, of 38¼ Baroach rs. | 0 | 15 | 11 | 38.129 | (0.4766) |
| | ,, man, of 40 sers..... | 39 | 3 | 10 | ... | (0.4768) |
| Haverí, Mad. Doáb. | Kachchá ser, for groceries, 23⅓ rs. | 0 | 9 | 9 | 23.242 | (0.2905) |
| | Dharâ (for selling) = 12 sers ... | | | | | |
| | Pakká ser, for grain (82 cub. in.) | 2 | 6 | 13 | 94.336 | (1.1792) |
| Haidarábád, Mad. | Ser, of 80 Haidarábád rupees. | 1 | 15 | 12 | 77.170 | (0.9646) |
| | Kachchá man, of 12 sers..... | 23 | 13 | 0 | ... | 0.2893 |
| | Pakká ,, of 40 ,, ..... | 79 | 6 | 0 | ... | 0.9646 |
| | Pala, of 120 sers for selling..... | 238 | 2 | 0 | ... | 2.8938 |
| Indor, Málwá. | Ser, of 82 Ujjain rupees..... | 2 | 0 | 6¾ | 78.803 | (1.9850) |
| | Man, of 20 sers (for grain)..... | 40 | 8 | 6 | ... | 0.4925 |
| | Mauní, of 12 mans ..... | 486 | 4 | 8 | ... | 5.9096 |
| | Man, of 40 sers, for opium, etc. | 81 | 0 | 12 | ... | 0.9849 |
| Islámpur, Calp. | Ser (see Calpí). ..... | 2 | 0 | 12 | 79.600 | (0.9950) |
| | Pakká ser. ..... | 2 | 0 | 15 | 80.056 | (1.0007) |
| Jámkhair, Ahmadnagar. | Ser, commercial, of 80 Ankusí rs. | 1 | 15 | 8½ | 76.638 | (0.9580) |
| | ,, of capacity = 72 tanks..... | 2 | 4 | 14½ | 89.702 | (1.1213) |
| | Man, of 64 sers ?..... ..... | 147 | 10 | 0 | ... | 1.7941 |
| Japan. | Pecul (same as China)..... | lbs. 133⅓ | | | ... | 1.6254 |
| Jaulnah, Hyder. | Tolá, of 12 máshas..... | grs. 184.5 | | | 1.025 | ... |
| | Pakká ser, of 80 rs. for grain... | 2 | 0 | 1 | 77.926 | ... |
| | ,, man, of 40 sers..... | 80 | 2 | 8 | ... | 0.9471 |
| | Kachchá man, of 12 sers (for ghí, liquids, etc.), measure.... | 24 | 0 | 12 | ... | 0.2922 |
| Java. | See Batavia. | | | | | |
| Judda, Arab. | Man, of 30 vakias. ..... | 2 | 3 | 9⅖ | 86.400 | 0.0270 |
| | Bahar = 100 mans, or 10 frazils. | 222 | 8 | 0 | ... | 2.7039 |
| Jumbusur, Guj. | Market ser, of 40 Baroach rs.... | 1 | 0 | 2½ | 39.270 | ... |
| | ,, man, of 40 sers. ..... | 40 | 6 | 4 | ... | 0.4908 |
| | Cotton ,, of 42 ,, ..... | 1 | 0 | 9 | 40.256 | 0.5153 |
| | Pergunna ser, of 40¾ Bar. rs.... | ..... | | | 40.000 | (0.5000) |
| Jungypur, Ben. | Ser, of 16 chhatâks..... | 1 | 8 | 0½ | 58.408 | (0.7301) |
| | ,, liquid measure..... | c. i. 50½ | | | ... | ... |
| Junkceylon, Is. | Bahar = 6½ Ben. fac. mans..... | 485 | 5 | 5½ | ... | 5.8981 |
| Katí, Abed. | Ser of 80 Ankusí rs..... | 1 | 15 | 8½ | 76.638 | (0.9580) |
| | ,, of capacity = 95 do..... | 2 | 5 | 8 | 91.146 | (1.1393) |
| Kutul, ,, | ,, = 100 do..... | 2 | 7 | 6½ | 95.778 | (1.1972) |
| Kotá, Ajmír. | ,, of 30 Kotá rs. ..... | 0 | 12 | 0 | 29.166 | (0.3646) |
| | Man, of 40 sers. ..... | 30 | 0 | 0 | ... | 0.3646 |
| | Seyn (measure), of 864 Kotá pice. | 34 | 2 | 3 | ... | 0.4148 |
| Kurda, Gujarát. | Ser, of 80 Ankusí rs. ..... | 1 | 15 | 8½ | 76.638 | (0.9580) |
| | ,, of capacity, 90 do..... | 2 | 3 | 7½ | 86.208 | (1.0776) |
| Kumbharia, Sur. | Man, of 40 sers, 8 pice. ..... | 37 | 13 | 10 | ... | 0.4601 |
| Kurod, ,, | ,, ,, ,, ,, 15 ,, ..... | 37 | 15 | 8½ | ... | 0.4615 |
| Loheia, Arab. | Quintal, of 100 rottolos. ..... | 62 | 8 | 0 | ... | 0.7596 |
| Luckipur, Ben. | Fact. and Bz. weights of Calcutta. | | | | | |
| Lukhnow, Oudh. | Ser, of 100 Lukhnow rs..... | 2 | 7 | 6⅝ | 95.817 | (1.1977) |
| Macassar, Celebes Is. | Tale, of 16 mace = 614 grains... | ..... | | | 34.111 | ... |
| | Pecul, of 100 catties ..... | 135 | 10 | 0 | ... | 1.6483 |
| Madras. | Pagoda weight = 52.56 grs. ... | ..... | | | 0.292 | ... |
| | Man, of 40 sers, or 8 vis..... | 25 | 0 | 0 | 24.304 | 0.3038 |
| | Khandí, of 20 mns. ..... ..... | 500 | 0 | 0 | ... | 6.0764 |
| | Garce, for grain = 12.8 mns. ... | 320 | 0 | 0 | ... | 3.8888 |

| Place. | Denomination of Weights. | Value of English avoirdupois weight. lb. oz. dr. | No. of standard Tolás per ser, etc. Tolás. | Value of mans, etc. in Mans and decimals. Mans. |
|---|---|---|---|---|
| Madras. | Padí, oil measure = 8 olluks, or | cub. in. 9375 | | |
| | Parra, for chunám = 5 markáls.. | cub. in. 3750 | | |
| | Mangelin, for pearls = 6 grains. | | | |
| | 18 Mad. chows = 55 Bom. chows. | | | |
| Madurá, Carn. | Ser, of 80 Madurá pagodas ..... | 0 10 4 | 24.913 | ... |
| | Man, of 39.244 sers..... | 25 0 0 | ... | 0.3038 |
| Malabar. | Palám, of 9 Pondich. rs. 1 kás... | grs. 1624 | 9.022 | ... |
| | Tulám, of 40 sers..... | 23 3 1 | ... | 0.2817 |
| Malacca, Malay. | Catty, of 20 buncals, for gold.... | 2 0 12 | 79.600 | ... |
| | Pecul=100 com. catties of 16 tales | 135 0 0 | ... | 1.6407 |
| | Bahar, of 3 peculs..... | 405 0 0 | ... | 4.9219 |
| | Ganton, measure. ..... | 6 8 0 | 252.775 | ... |
| | Kip, of tin = 30 tampang. ..... | 40 11 0 | ... | 0.4945 |
| Malda, Ben. | Ser, of 100 sa. wt. (72 c. i.)..... | 2 9 0 | 100. | (1.2456) |
| | „ 96 (at Mogulbari)..... | 2 7 5¾ | 95.665 | (1.1958) |
| | „ 82.10 (at Jelapír)..... | 2 1 14 | 82.336 | (1.0292) |
| | „ 80 (English bázár)..... | 2 0 14¼ | 79.942 | (0.9993) |
| Málwá, Central India. | Tolá, of 12 máshas ..... | grs. 190 | 1.055 | ... |
| | Ser, of 84 Sálimsáhí rs..... | 2 0 6 | 78.689 | ... |
| | Man, of 20 sers..... | 40 7 8 | ... | (0.4918) |
| Mangalor, Mal. | Ser, of 24 Bombay rs, (42.79 grs.) | 0 9 13 | 23.850 | ... |
| | Man, market, of 46 sers. ..... | 28 2 4 | ... | 0.3419 |
| | „ Company's (16 rs. heavier). | 28 8 13 | ... | 0.3469 |
| | „ for sugar = 40 sers. ..... | 24 7 8 | ... | 0.2973 |
| | Ser, of capacity = 84 Bomb rs... | ..... | 84.000 | ... |
| Manilla, Phil. Is. | Spanish weights and Chin. pecul. | | | |
| Massuah, Red Sea. | Rottolo, of 12 vakias (4800 grs.) | 0 10 15⅓ | 26.635 | ... |
| Masulipatam, M. | Tulám = 30 chunáms. ..... | grs. 179.04 | 0.995 | ... |
| | Kachchá ser and man, as Madras. | 0 11 4 | 27.342 | (0.3418) |
| | Pakká man = 40 sers of 2lbs. | 80 0 0 | ... | 0.9722 |
| | Ser, of 90 Madras pagodas. ..... | 0 9 0 | 21.875 | (0.2734) |
| | „ „ 72 „ „ (for metals) | 0 12 0 | 29.165 | (0.3646) |
| | „ „ 96 „ „ (for cotton) | 8 5.6 | 20.210 | ... |
| | Markál, grain measure, 12 sers. | galls. 3⅛ | | |
| | Garce, „ „ 4800 „ | „ 1250 | | |
| Mauritius. | Ton, of sugar = 2000 French, etc. | lbs. 2160 | ... | 26.2500 |
| | „ „ grain and coffee = 1400 „ | 1512 0 0 | ... | 18.3750 |
| | „ „ cloves = 1000 „ | 1080 0 0 | ... | 13.1250 |
| | „ „ cotton = 750 „ | 810 0 0 | ... | 9.8437 |
| Mocha, Arab. | Man, of 40 vakias..... | 3 5 0 | 128.640 | 0.0402 |
| | Bahar = 15 frazils, of 10 mans... | 450 0 0 | ... | 5.4687 |
| | Teman, measure of rice. ..... | 168 0 0 | ... | 2.0417 |
| | Gudda, liquid measure = 2 gall. | 18 0 0 | ... | 0.2187 |
| Moluccas. | See Amboyna and Banda. | | | |
| Mundissor, Mal. | Ser, of 92 Sálimsáhí rs. ..... | 2 3 7¾ | 86.246 | (1.0781) |
| | Man, of 15 sers (?). ..... | 34 4 4½ | ... | 0.4042 |
| Maisúr, Province. | Ser = 24 Maisúr rs. of 179 grs. | 0 9 13 | 23.850 | (0.2981) |
| Nassuk, Ahmad. | „ of 79 Ank. rs. 4 máshas ... | 1 15 4½ | 37.030 | (0.9504) |
| | „ „ capacity, 99 Ank. rs. 2m. | 2 7 2½ | 95.018 | (1.1877) |
| Natal, Sumatra. | Tompong, (Benj. wt.) 20 catties | 80 0 0 | ... | 0.9722 |
| | Catty ootan (for do. and camphor) | 4 0 0 | 155.555 | ... |
| | Tale, for precious metals ..... | grs. 584 | 3.244 | ... |
| | Sukat, grain measure=12 pakkás | cub. in. 4029 | ... | ... |
| Negapatam, Car. | Ser, of 8 paláms ..... | 0 9 10½ | 23.470 | ... |
| | Man, of 41,558 sers. ..... | 25 0 0 | ... | 0.3038 |
| New Hoobly, M. Doáb. | Kachchá ser = 20⅝ Mad. rs. ... | 0 8 6 | 20.352 | (0.2594) |
| | Pakká ser = 106½ do. ..... | 2 11 13 | 106.488 | (1.3311) |

| Place. | Denomination of Weights. | Value in English avoirdupois weight. | No. of standard Tolás per ser, etc. | Value of Mans, etc., in Mans and decimals. |
|---|---|---|---|---|
| | | lb. oz. dr. | Tolas. | Mans. |
| New Hoobly, Doáb | Dhará contains 13 sers. | cub. in. 1170 | ... | ... |
| Nolye, Málwa. | Ser, of 80 Ujjain rs. | 1 15 10 | 76.864 | ... |
| | Man, of 20 sers. | 39 8 8 | ... | 0.4805 |
| Nolgund, Mad. Doáb. | Kachchá ser = 20¾ Mad. rs. | 0 8 8½ | 20.736 | (0.2592) |
| | Pakká ser = 110¼ M. rs. 96.6 c.i. | 2 13 5½ | 110.210 | (1.3776) |
| Okalésur, in Baroch. | Ser, of 38 Baroch rs. | 0 15 6¾ | 37.483 | ... |
| | Man, of 40 sers | 38 8 13 | ... | 0.4685 |
| | Pergunna ser, 39¾ Br. rs. | 1 0 2¾ | 39.306 | (0.3913) |
| | Man, 40 sers. | 40 6 13 | ... | 0.3912 |
| Omutwara, Mál. | Ser, of 81 Salimsáhí rs. | 1 15 3¾ | 75.916 | (0.9489) |
| | Man, of 28 sers. | 54 10 8 | ... | 0.6642 |
| Onor, in Canára. | Man, of 40 to 44 sers. | 25 0 0 | ... | 0.3038 |
| | Háne, grain measure. | cub. in. 87¾ | ... | ... |
| Ujjain, Málwa. | Ser, of 80 Ujjain rs. | 1 15 10 | 16.866 | (0.9608) |
| | Man, of 16⅔ sers. | 33 5 13 | ... | 0.4054 |
| | Mání, of 12 mans | 400 5 12 | ... | 4.8655 |
| Paichal, Súrat. | Man, of 48 sers, 8 pice Súrat. | 45 4 0 | ... | 0.5469 |
| Palamkota, Carnátic. | Tulám, of 100 paláms, (½ a mn.) | 12 8 0 | ... | 0.1519 |
| | Padi, for metals. | 4 15 0 | 192.014 | 0.0600 |
| | Marakkál, retail = 1 1/6 gall. reven. | galls. 5/32 | ... | ... |
| Palimbang, Sum. | Catty, of 10 tales | grs. 9494 | 52.744 | ... |
| | Bally, of 10 gantangs | 81 6 0 | . . | 0.9888 |
| Palloda, Ahmad. | Ser, of 78 Ank. rs. 10½ máshas. | 1 15 2 | 75.651 | (0.9456) |
| | „ of capacity, 103½ Ank. rs. | 2 8 13 | 99.195 | ... |
| | Man, „ of 64 sers | 163 4 0 | ... | 1.9839 |
| Pandrí, Kalpí. | Ser. | 2 11 12 | 106.340 | (1.3292) |
| Panwarí, „ | „ | 2 2 2 | 82.943 | (1.0368) |
| Parnair, Ahmad. | „ of 76½ Ankusí rs. | 1 14 2½ | 73.296 | (0.9162) |
| | „ of capacity, 95 rs. 7 m. | 2 5 2 | 90.233 | (1.1279) |
| Patna, Bihár. | Tolá, of 12 máshas. | grs. 209 | 1.161 | ... |
| | Ser, from 45 to 81 sá. wt. | ..... | 80. | 1.000 |
| Pegu, Birma. | Tical, 100 to the vis. | grs. 237½ | 1.368 | ... |
| | Khandí, 150 vis, reckoned at | 600 0 0 | ... | 6.0764 |
| | Basket, rice measure, 16 vis. | 58 0 0 | ... | 0.7048 |
| Persia. | Man of Shíráz = 600 miscals. | 12 10 14.4 | 493.172 | 0.1541 |
| | Man of Tabríz, 300 do. 150 dirhs. | 6 5 7.2 | 246.530 | 0.0770 |
| | Artaba, corn measure, 2 bushels | | | |
| Pratápgarh, Ajmír. | Ser, of 80 Sálimsáhí rs. | 1 14 13½ | 74.967 | ... |
| | Man, of 20 sers. | 38 8 14 | ... | 0.4686 |
| Pondicherry, Car. | Ser, of 24⅔ Pon. rs = 731¼ fan. | 0 9 11½ | 23.622 | ... |
| | Man, of 8 vis. | 25 14 5½ | ... | 0.3146 |
| | Garce of grain, = 100 markáls. | qurs. 13½ | | |
| Penang. | Malay pecul, of 100 catties. | 142 10 10⅔ | ... | 1.7338 |
| | Bahar, of 3 peculs. | 428 0 0 | ... | 5.2013 |
| | Gantang measure, = 4 chupahs | cub. in 27.165 | ... | ... |
| Puna. | See Dakhan. | | | |
| Quilon, Trav. | Olunda, or old Dutch pound | 1 1 8 | 42.535 | ... |
| | Man, of 25 old Dutch pound. | 27 5 8 | ... | 0.3225 |
| | Tulám, of 100 pal. for cotton. | 16 11 5.6 | ... | 0.2029 |
| | „ for spices. | 15 9 7.3 | ... | 0.1894 |
| Radnagor, Ben. | Sers of 62, 64, and 80 sá. wt. | ..... | 80. | 1.000 |
| | Bágí, for padí = 5 sers of 62 | ..... | 310. | (0.7750) |
| Rahorí, Ahmad. | Ser, of weight = 77 Ank. rs. | 1 14 5¾ | 73.790 | (0.9223) |
| | „ of capacity = 115½ do. | 2 13 8¼ | 110.666 | (1.3833) |
| Rangoon. | Vis of 100 tikals. | 3 5 5⅓ | 140. | ... |
| | Khandí, of 150 vis, reckoned. | 550 0 0 | ... | 6.0764 |
| | Ten, or basket of rice = 16 vis. | 58 4 0 | ... | 0.7078 |

| Places. | Denomination of Weights. | Value of English avoirdupois weight. lb. oz. dr. | No. of standard Tolás, per ser, etc. Tolás. | Value of Mans, etc., in Mans and decimals. Mans. |
|---|---|---|---|---|
| Rámbhari, Ahmadnagar. | Ser, of 74 Ankusí rs. ..... | 1 13 $2\frac{3}{4}$ | 70.901 | (0.8863) |
| | ,, of capacity, 102 do. ..... | 2 8 $3\frac{1}{2}$ | 97.750 | ... |
| | Man, of 64 sers ..... | 160 13 8 | ... | 1.9548 |
| Rungypur, Ben. | Sers, of 60, 65, 73, 80, 90, and 460 tolás; the standard ser ... | ..... | 80. | 1.000 |
| Rutlam, Málwa. | ,, of 84 Sálimsáhí rs. ... ..... | 2 0 6 | 78.689 | ... |
| | Man, of 20 sers. ..... | 40 7 8 | ... | 0.4918 |
| Salangor, Maly. | Bahar, of 240 catties ..... | 324 0 0 | ... | 3.9374 |
| Sankarídrúg, Carnatic. | Ser, of 8 paláms for provisions. | 0 9 12 | 23.698 | ... |
| | Man, of 41.256 sers. ..... | 25 0 0 | ... | 0.3038 |
| Santipur, Ben. | Sers, of 60, 80, 84, and 96 tolás; also factory weights. ... | ..... | 80. | 1.000 |
| Seringapatam. | Kachchá ser, of 24 sultání rs. | 0 9 $11\frac{1}{3}$ | 23.596 | ... |
| | ,, man, of 40 sers. ..... | 24 4 8 | ... | 0.2950 |
| | Pakká ser, of grain; 84 Sul. rs. | 2 1 $15\frac{3}{4}$ | 82.601 | ... |
| | ,, kolaga = 16 sers..... | 33 15 12 | ... | 0.4130 |
| Siam. | Pecul = 50 catties of 20 tales... | 129 0 0 | ... | 1.5677 |
| Singapore, Malay. | Buncal, for gold ..... | grs. 832 | 4.622 | ... |
| | Pecul, of 100 catties, (see China) | | | |
| Sinkell, Sumatra. | Tompong, of 20 cats. for Benzoin | 3 8 0 | 36.110 | ... |
| | Pecul, etc. as in China. | | | |
| Súlú, Sunda. | ,, as in China. | | | |
| Sunamukí, Bl. | Sers, of 58, 10, 60, 72, $73\frac{1}{4}$, 75, and 82.10 tolás; stand. ser. | ..... | 80. | 1.0000 |
| Suez, Red Sea. | Rottolo, of 144 drams. ..... | 1 4 0 | 48.610 | ... |
| | Quintal varies from 110 to 150 rot | | | |
| Súrat, Gujarát. | Tolá, of 12 máshas..... | grs. 187.2 | 1.040 | ... |
| | Ser, of 35 tolás ..... | 0 15 0 | 36.458 | (0.4557) |
| | Man, of 40 sers. ..... | 37 8 0 | ... | 0.4558 |
| Tellicherry, in Malabar. | Ser, of 20 Súrat rupees. ..... | 0 8 $2\frac{2}{3}$ | 19.849 | (0.2481) |
| | Man, of 64 sers. ..... | 32 11 0 | ... | 0.3972 |
| Ternate, Molucc. | Pecul, of 100 catties. ..... | 130 3 8.3 | ... | 1.5826 |
| Tranquebar, Cor. | Man, = 68 lbs Danish..... | 74 12 9.6 | ... | 0.9088 |
| Travancor, M. | Tulám, of 20 pounds ..... | 19 14 11 | ... | 0.2420 |
| | Khandí (30 tuláms), for purchase | 597 8 10 | ... | 7.2618 |
| | ,, (20 mans), for sale..... | 500 8 2 | ... | 6.0826 |
| | Parra, grain measure ..... | qrts. 2 | ... | ... |
| Trichinopoly, Carnatic. | Pakká ser, = 27 tuláms..... | 1 14 8 | 74.132 | ... |
| | Man, = 13.114 sers..... | 25 0 0 | ... | 0.3038 |
| | Ser, for metals = 4167.7 grs. ... | 0 9 $8\frac{1}{2}$ | 23.167 | (0.2896) |
| | Marakkál, gr. measure, $1\frac{1}{8}$ gall. | | | |
| Trincomalí. | See Colombo. | | | |
| Vellor. | See Arcot. | | | |
| Vizagapatam. | See Masulipatam. | | | |
| Wallahjábád. | See Arcot. | | | |

## LINEAR MEASURES.

Notwithstanding the boast of Abú-'l-Fazl, that, among other beneficial effects of Akbar's administration, he had fixed one standard of linear measure for the whole of India, we find at the present day as great irregularity in this branch of our subject, as could have prevailed in his day, or rather much greater; on account of the semi-introduction of European measures in the British Indian territories, and in the Dutch and Portuguese settlements before them.

There is this peculiarity in the linear systems—that the basis of all is the same, the cubit or human fore-arm: and this unit is found in Oriental countries, as in those of the West, divided into two spans, and 24 finger's-breadths. Thus, under the Hindú princes, the *háth* (in Sanskrit *hasta*) was equal to two *vitesti* or 'spans,' and to 24 *anguls* (*angula*). The *angul* 'finger' is divided into 8 *jau* (s. *yava*) or 'barley-corns.'

The subdivisions of the *yava*—proceeding downwards to the *paramánus*, or 'most minute atom,' according to the arithmetical works of the Hindús—are, of course, theoretical refinements which it is unnecessary to notice: a full account will be found in Colebrooke's treatise in the 'Asiatic Researches:' [epitomised above, vol. i. page 211]. Proceeding upwards, four *háths* or 'cubits' are equal to a *danda*, or 'staff:' and 2000 *dandas* make a *krosa*, or *kos*, which should be, by this estimation, 4000 yards English, or nearly $2\frac{1}{4}$ miles. The kos is generally for convenience now called equal to two English miles. Four *krosa* = one *yojana*, nearly ten miles. The 'Lílávatí' also states that 10 *háths* make one *bans* or 'bamboo,' and 20 *bans* in length and breadth = 1 *niranga* of arable land.

That the cubit was of the natural dimensions (of 18 inches, more or less) can hardly be doubted; indeed, where the *háth* is talked of, to this day, among the natives, the natural human measure is both understood and practically used, as in taking the draft of water of a boat, etc. In many places also, both in Bengal and in South India, the English cubit has been adopted as of the same value as the native measure.

The *gaz*, or yard, now in more general use throughout India, is of Muhammadan introduction: whether this is derived also from the cubit (for the Jewish cubit is of the same length) is doubtful; but, like the *hasta*, it was divided into 24 *tasús*, or 'digits,' corresponding more properly to inches.

Abú-'l-Fazl, in the 'Ayín-i Akbarí,' gives a very full description of the various gaz in use under the emperors, as compared with the earlier

standards of the Khalífs. He expresses their correct length in finger's-breadths, which may be safely taken as three-quarters of an inch each.

For facility of reference, his list is here subjoined, with the equivalents in English measure at this rate :—

ANCIENT GAZ MEASURES ENUMERATED IN THE 'AYÍN-I AKBARÍ.'

| | | *English.* |
|---|---|---|
| The Gaz-saudá of Hárún-al-Rashíd = 24⅔ (some MSS. have 25⅔) fingers of an Abyssinian slave, the same used in the Nilometer of Egypt[1] | = | 18½ in. |
| The Ḳasbah gaz, of Ibn Abílílah = 24 fingers | = | 18 „ |
| The Yúsufí gaz, of Baghdád = 25 „ | = | 18¾ „ |
| The small Hashamah gaz[2] of Abú Músa Asharí = 28⅓ fingers | = | 21¼ „ |
| The long „ „ „ Mansúr 'Abbás = 29⅓ „ | = | 22¼ „ |
| The Umríah gaz of the Khalif Umr = 31 „ | = | 23¼ „ |
| The Mámúníah gaz of Mámún 'Abbásí = 69½ „ | = | 52⅛ „ |
| The gaz Masáhat = 28 „ | = | 21 „ |
| Sikandar Lodi's gaz of 41½ silver Sikandarís'[3] diameter, modified by Humáyún to 43 „ = 32 „ | = | 26 „ |

This was used in land measurements till the 31st year of Akbar.

[1] The cubit of the Nilometer is supposed to be the same as that of the Jews, which is exactly two feet English :—if so, the 24 digits will be, precisely, inches. Volney, however, makes it 20½ French, or 22 English inches. Some allowance must probably be made for the broad hand of a negro, but the other measures will not be affected by the same error, as they must be referred to the ordinary delicate hand of a native of Asia.

[2] These two are also called the Gaz Mullik and Gaz Ziádiah, because Ziád, the adopted son of Abú Sofián, made use of them for measuring the Arabian Irak.

[3] [Abú-'l-Fazl, in noticing the various descriptions of yard-measures introduced at different times into Hindústán, makes incidental mention of certain coins designated Sikandarís—upon the basis of a given number of the diameters of which the Gaz of Sikandar Lodí was formed. The class of money described ('Num. Chron.'), evidently furnished, among their other uses, the data for this singularly-defined measure. Any tyro in Indian numismatology, under whose eye many specimens of this mintage may chance to pass, cannot fail to remark that, imperfect as their configuration undoubtedly is, as compared with our modern machine-struck money, yet that they hold a high place among their fellows in respect to their improved circularity of form, and general uniformity of diameter—points which had certainly been less regarded in the earlier produce of the Dihlí mints.

The passage alluded to is to the following effect:—

سلطان سکندر لودي در هندوستان نیز کزي در میان آورد و آنرا چهل و یک‌ونیم اسکندري اندازه کرفت و آن مسین نقدیست کرد نقره‌امیز جنت اشیانے نیم دیکر افزود چهل و دو قرار کرفت [a]

With a view to make these coins, even at the present day, contribute towards our knowledge of the true length of this Gaz—which is still a *vexata quæstio*, I have carefully measured a set of 42 of these pieces, arranged in one continuous line: the result arrived at is, that the completion of the 30th inch of our measure falls exactly opposite the centre of the 42nd coin.

The specimens selected for trial have not been picked, beyond the rejection of five

[a] [Page ١٧٣ Sir H. M. Elliot's MS. copy of the 'Ayín-i Akbarí.' See also p. 355, vol. i., Gladwin's translation.]

| | | *English.* |
|---|---|---|
| The Akbarí gaz, for cloth measure ..... | = 46 fingers ..... | = 34½ in. |
| The Iláhí gaz, established by Akbar, as the sole standard measure of the empire ..... | = 40 „ ..... | = 30¾ „ [1] |

The Akbarí bíghá, of 3600 square gaz = 2600 square yards = 0.538, or somewhat more than half an acre, on the above estimation.

The Iláhí gaz of Akbar was intended to supersede the multiplicity of measures in use in the 16th century; and, in a great degree, it still maintains its position as the standard of the Upper Provinces. In general, however, different measures are employed in each trade, and the cloth-merchant, in particular, has a distinct gaz of his own. Thus the cloth gaz has assimilated in many places to two háths, or one yard; and the frequent employment of English tape-measures, as well as carpenter's two-feet rules, will ere long confirm the adoption of the British standard to the exclusion of the native system, for the linear measure of articles in the bázár.

The true length of the Iláhí gaz became a subject of zealous investigation by Mr. Newnham, Collector of Farrukhábád, and Major Hodgson, Surveyor-General, in the year 1824, during the progress of the great revenue survey of the Western Provinces, when it was found to be the basis of all the records of land measurements and rents of Upper India. As might have been expected, no data could be found for fixing the standard of Akbar with perfect accuracy; but every comparison concurred in placing it between the limits of 30 and 35 English inches; and the great majority of actual measures of land in Rohilkhand, Dihlí, A'gra, etc., brought it nearly to an average of 33 inches. Mr. Duncan, in the settlement of the Benáres province in 1795, has assumed 33.6 inches to the Iláhí gaz, on the authority, it may be presumed, of standards in existence in the city, making the bíghá = 3136 square yards.

The results of the different modes of determination resorted to in 1824-5, so characteristic of the rude but ingenious contrivances of the natives, are curious and worthy of being recorded. Maj. Hodgson made the length of the Iláhí gaz—

very palpably worn pieces out of the total 48 of Mr. Bayley's coins, which were placed at my disposal.

The return now obtained I should be disposed to look upon as a little below the original standard, notwithstanding that it slightly differs from the determination of the measure put forth by Prinsep; but I must add that Prinsep himself distrusted his own materials, and was evidently prepared to admit a higher rate than he entered in his leading table.—E. T.]

[1] Should the length of this gaz be taken at 32 or 33 inches, proportionate corrections must be made in the other measures.

From the average measurement of 76 man's finger's-breadths..... = 31.55 in.
From the average size of the marble slabs in the pavement of the Táj at Agra (said to be each a Shâh-jahání gaz of 42 fingers ?)..... = 33.58 „
From the side of the reservoir at the same place, called 24 gaz ..... = 32.54 „
From the circuit of the whole terrace, 532 gaz (?) ..... = 35.80 „

Mr. Newnham, from the average size of 14 Chár-yárí rupees, supposed to be each one finger's-breadth, makes it ..... = 29.20 „
From the testimony of inhabitants of Farrukhábád..... = 31.50 „
From statement in the 'Ayín-i Akbarí,' of the weight of the cubic gaz of 72 kinds of timber (this would require a knowledge of the weights)

Halhed, from average measurement of 246 barley-corns ..... = 31.84 „
From ½ sum of diameters of 40 Mansúrí pice ..... = 32.02 „
From ⅛ of 4 human cubits measured on a string ..... = 33.70 „
From average of copper wires returned by Tahsíldárs of Murádábád as counterparts of the actual measures from which their bíghás were formed ..... ..... = 33.50 „

Mr. Duncan, as above noticed, assumed the Iláhí gaz at Benáres ..... = 33.60 „
In Barelí, Bulanshahr, Agra, as in the following table, it is ..... = 32.5 „

It is natural to suppose that the gaz adopted for measuring the land should vary on the side of excess, and probably all the above, thus derived, are too long. The Western Revenue Board, thinking so many discrepancies irreconcilable, suggested that the settlements should everywhere be made in the local bíghá, the surveyors merely noting the actual value of the Iláhí gaz in each village, and entering the measurement also in acres; but the Government wisely determined rather to select a general standard, which should meet as far as possible the existing circumstances of the country. Thus the further prosecution of the theoretical question was abandoned, and an arbitrary value of the Iláhí gaz was assumed at 33 inches, which was in 1825-6 ordered to be introduced in all the revenue-survey records, with a note of the local variation therefrom on the village maps, as well as a memorandum of the measure, in English acres. Mr. Holt Mackenzie thus describes the convenience which the adoption of this standard (sanctioned at first only as an experiment and liable to reconsideration) would afford in comparisons with English measures:—

'Taking the jureeb (side of the square beegh,a) at 60 guntehs, or 60 guz, the beeg,ha will be 3600 square guz, or 3025 square yards, or five-eighths of an English acre (3 roods, 5 perches). The jureeb will be equal to 5 chains of 11 yards, each chain being 4 guntehs. In those places where the jureeb is assumed at 54 gaz square, it would equal 4½ chains, giving 2450¼ square yards (or 2 roods, 10 perches). In either case the conversion from one to another would be simple, and the connection between the operations of the surveyors and the measurements of the revenue officers would be easily perceived.'

This convenient bíghá of 3600 square Iláhí gaz, or 3025 square yards, or five-eighths of an acre, may be now called the standard of the Upper Provinces. It is established also at Patna, and has been introduced in the settlements of the Ságar and Narbadda territories.

The notice of land measurement seems altogether to have been overlooked in the returns from the Bengal revenue officers, to the Hon. Court's circular; so that, with the exception of the facts gleaned from the official correspondence above alluded to, and other information hastily acquired from private sources, the present table exhibits nearly a blank in regard to the bíghás of Bengal Proper, Bihár, Cuttack, and Central India. Rennell's general estimate of the area of Bengal in bíghás of 1600 square yards merely followed the measure in use at Calcutta. The permanent settlement in these provinces left the land unmeasured, and obviated the necessity of an actual survey. In general terms, however, the bíghá of the Bengal provinces may be assumed at 1600 square yards, or about one-third of the English acre, and a little more than half of the up-country bíghá.

In Madras, Sir T. Munro established a measure (called ground or *máni*) of 60 × 40, or 2400 square feet, of which 24 make a *káni* = 57600 square feet, = 6400 square yards, or exactly four Bengal bíghás. The Madras *káni* is to the English acre as 1 to 1.3223, or as 121 to 160 nearly. In the jágír, the *adi* or Malabar foot is used, which is 10.46 inches; 24 *adis* = 1 *káli*, and 100 square *kális* = 1 *káni*, or nearly an English acre. The common *káli*, however, is 26 adies, or $22\frac{2}{3}$ feet, which makes the *káni* = 1 acre, $28\frac{3}{4}$ perches.

Of the land measures of the Bombay Presidency, Kelly's tables are altogether silent; but as the cubit and gaz are stated to correspond with 18 and 27 inches respectively, doubtless the square measure has also been brought to agree with some aliquot or multiple of the English acre.

It is much to be regretted that the information on this most important point should have proved so defective; but in justification of the officers to whom the Court's circular was addressed, it should be stated that the draft of instructions did not specifically allude to square measures, merely directing that 'for measures of length, one that is nearest to the cubit or ell, should be selected as the model to be sent home.'

TABLE *of Linear and Square Measures of India.*

| Place. | Denomination. | Value in English meas. |
|---|---|---|
| Agra, Presidency | Standard Iláhí gaz, assumed at | 33 inches. |
| | Standard bíghá of Western Provinces = 60 × 60 gaz = 3600 gaz | 3025 sq. yds. ($\frac{5}{8}$ acres). |
| | Local gaz varies from 32.8 to 33.25 av. | 32.625 inches. |
| Ahmadábád | Gaz, for cloth | 27.75 „ |
| | „ „ velvet | 34.25 „ |
| | „ „ artificers | 23.33 „ |
| Ahmadnagar | Háth of 14 tasús | 14.00 „ |
| | Gaz, of 1¾ háth | 24.50 „ |
| Alligarh | „ from 30.5 to 33.4 | 33.00 „ |
| Molucca | Covid, or cubit | 18.13 „ |
| Ahmod | Gaz | 27.12 „ |
| Anjar | „ of 34 tasús | 26.40 „ |
| Aurungabander | „ „ 16 garce | 32.00 „ |
| Bagulkota | „ „ 24 tasús | 32.87 „ |
| Bangalor | Háth = 19.1 inches | 38.90 „ |
| Bantam | Hasta | 18.00 „ |
| Bareli | Gaz, from 32.0 to 33.4 | 32.90 „ |
| Baroda | „ of 24 tasús | 27.12 „ |
| Batavia | Ell = 27¾ inches, Foot = | 12.36 „ |
| Bauleah | Cubit (or háth) | 18. „ |
| Benáres | Gaz, tailor's | 33. „ |
| | „ weaver's | 42.5 „ |
| | „ cloth-merchant's | 37.5 „ |
| | „ architect's (maimárí) | 25.33 „ |
| | Bíghá, by Reg. II., 1795 | 3136 square yards. |
| Bencoolen | Hailoh, or two cubits | 36 inches. |
| Betelfaki | Gaz | 27 „ |
| Bombay | Háth = 18 inches; the gaz = | 27 „ |
| Bulandshahr | Gaz (originally 33) | 31.75 „ |
| Baroch | Zil'a gaz | 27.25 „ |
| | Wusa | 89.6 square inches. |
| | Bíghá = 20 wusa | 2 roods, 20 perches. |
| Bushire | Half gaz, Sháhí | 20 inches. |
| | „ „ Bushírí | 18.4 „ |
| Basrah | Aleppo yard | 26.4 „ |
| | Baghdád | 31.6 „ |
| Calcutta | Bíghá = 20 kaṭṭhá of 16 chhaṭáks | 1600 square yards. |
| | Kaṭṭhá | 720 sq. feet = 80 sq. yds. |
| | Chhaṭák | 45 „ „ = 5 „ „ |
| Calicut | Gaz | 28.6 inches. |
| Kalpí | „ = 16 girás | 40 „ |
| Cambay | „ | 28 „ |
| | Morgen of 600 square roods | 2 English acres. |
| China | Mathematical foot | 13.12 inches. |
| | Builder's „ | 12.7 „ |
| | Tailor's „ | 13.33 „ |
| | 200 lís = 1 degree | 69.166 miles. |
| Chittagong | Nal, or bamboo, of 8 háths = | 12 feet. |
| (Mug land measures) | Ganda, of 4 kaurís = 2 × 3 nals = | 96 sq. yds. |
| | Káni = 20 gandas = 12 × 10 nals = | 1920 sq. yds. |
| | Dun = 16 kánís | 30720 sq. yds. or 6.35 acres. |
| | Sháhí measures, 4 times greater | Seldom used now. |
| Kásimbazar | Háth | 19.12 inches. |
| Dharwár | Háth, for cotton cloths | 19.36 „ |
| | Gaz | 32.75 „ |
| Dihlí | Average bíghá | 2500 sq. yds. |
| Etáwa | Gaz from 32 to 33 | 32.50 inches. |
| Farrukhábád | Cloth gaz = 12 muts (palms) = 48 angul | 36 „ |
| | Háth, or cubit = 24 angul or fingers | 18 „ |
| | Land gaz 10½ muts or 42 fingers = 14 girás on cloth, g. of 16 | 31½ „ |

| Place. | Denomination. | Value in English meas. |
|---|---|---|
| Farrukhábád ... | Bighá, of 20 biswa = 36.00 Iláhí gaz... | 2756¼ square yards. |
| Goa ..... | Portuguese Covado ..... | 26.66 inches. |
| Gamron ..... | Gaz, 93 = 100 English yards ..... | 38.7 „ |
| Hansut ..... | „ of 24 tasús ..... | 27.12 „ |
| Hánsí ..... | „ „ „ „ ..... | 34.75 „ |
| Haidarábád ..... | Cloth measure ..... | 35.33 „ |
| Japan ..... | Inc ..... | 75.00 „ |
| Jaulná ..... | Gaz ..... | 33.6 „ |
| Jambusur ..... | „ ..... | 27.12 „ |
| Jungle Mahals | Bighá, 80 × 80 háths ..... | 1600 square yards nearly. |
| Bancura ..... | Gaz, of two háths = ..... | 36 inches nearly. |
| Loheia ..... | Peek ..... | 27.0 inches. |
| Madras ..... | Máni, 60 × 40 feet ..... | 2400 square feet. |
| | Káni = 24 máni ..... | 1.3223 acres. |
| Malabar ..... | Foot ..... | 10.46 inches. |
| Malacca ..... | Kovid ..... | 18.12 „ |
| Málwa ..... | Gaz (from 28 to 32) ..... | 30.00 „ |
| | Bighá, of 20 wusas ..... | 2 roods nearly. |
| Massuah ..... | Peek ..... | 27.0 inches. |
| Masulipatam ... | Yard ..... | 38.25 „ |
| Meerut ..... | Land gaz ..... | 33.00 „ |
| Mocha ..... | Kobid = 19 inches. Gaz ..... | 25. „ |
| Murádábád ..... | Gaz, from 31.6 to 35.8 ..... | 33.50 „ |
| | Jarib = 20 gathás of 3 gaz ..... | 167.5 feet. |
| | Bighá = 18 × 18 = 324 square gathás ... | 2304 square yards. |
| New Hoobly ... | Gaz ..... | 31.75 inches. |
| Noulgund ..... | Gaz ..... | 33. „ |
| Palamkota ..... | Gajum, for cloth ..... | 36.45 „ |
| Pandrí ..... | Gaz ..... | 40.75 „ |
| Panwarí ..... | „ ..... | 36.37 „ |
| Patna ..... | „ for carpets, etc. (iláhí) of 44 fingers | 33. „ |
| | „ for broad cloth ..... | 42.5 „ |
| | Jarib, 20 bamboos of 3 gaz ..... | 55 yards. |
| | Bighá, 20 × katthás or bamboos ..... | 3025 square yards. |
| Persia ..... | Guerze, royal ..... | 37.5 inches. |
| | Common measure ..... | 25.0 „ |
| | Parasang, 20th of a degree at the equator | |
| Rangoon ..... | Taong, or cubit ..... | 19.1 „ |
| | Taing, or 1000 dhas ..... | 2 miles, 293⅔ yards. |
| Rangípur ..... | Gaz, for bafta cloths ..... | 63 inches. |
| Seringapatam ... | Gajah ..... | 38.5 „ |
| Siam ..... | Vouah (2000 = 1 league) ..... | 75.75 „ |
| Sunamuky ..... | Corah, used at the factory ..... | 52.4 „ |
| Súrat ..... | Gaz, builder's ..... | 27.6 „ |
| Saidábád ..... | Gaz, land, 31.3 to 32.7 ..... | 32.0 „ |
| Tellicherry ..... | Gaz ..... | 28.4 „ |
| Tirhút ..... | Revenue lagi, of 6½ háths = ..... | 9 feet 9 inches. |
| | Bighás, 20 × 20 lagis = ..... | 4900 square yards. |
| | Small lagi, or rod, 6¼ háths = ..... | 9 feet 4½ inches. |
| | Bighá, 20 × 20 ditto = ..... | 3906¼ square yards. |
| | (In Champaran and Chaprá, the lagi or rod is of 7 háths) ..... | |
| Travancor ..... | Tuda, for timber ..... | 20.46 cubic inches. |
| | Mura, of stone-cutters ..... | 33.02 inches. |
| | Kolu, in agriculture ..... | 21.16 feet. |
| Ságar ..... | Standard bighá introduced ..... | (See A'gra). |

At most of the places omitted in the above table, such as Acheen, Arcot, Belári, Carwar, Ceylon, Cochin, Comercolly, Jangípur, Bengal generally, Penang, Radnagor, Santipur, etc.; English measures alone are used, or at least a cubit founded on the English measure of 18 inches.

[The following notes are extracted from Elliot's 'Glossary,' already put under contribution (page 92):—

"The Biswa, from بیس 'twenty,' is the twentieth part of a 'Beeg,ha;' and besides being a measure of land, is also used to signify the extent of proprietary right in an estate. Each estate or village is considered an integer of one 'Beeg,ha,' which is sub-divided into imaginary Biswas and Biswansees, to show the right of any particular party. Thus, the holder of 5 Biswas is a holder to the extent of one-fourth of the entire village; precisely in the same way as the *As* was used amongst the Romans. Thus, *heres ex sumuncia*, 'heir to one twenty-fourth'—*heres ex dodrante*, 'heir to three-fourths'—*heres ex asse*, 'sole proprietor.' (Cic. Att. iv. 15, vii. 8.—Cic. pro Cæcina, c. 6.—Plin. l. v. Ep. 5.) In the same manner *bes*, *bessis*, was used to express a *biswa biswar*—'socius ex besse'—and thus in sound and meaning (of course there is no real connection) there is a close resemblance between the words. *Bes*, when it was thus applied as a sub-division of the *As*, was the eighth part of a *Jugerum* or acre; not, as is usually supposed, two-thirds.—'Partes duæ tertiæ pedes decem novem millia et ducentos hoc est *bes*, in quo scripula excii.' (Colum. lib. v. cap. 2).

"Coss, کوس कोस kos. The itinerary measure of India, of which the precise value has been much disputed, chiefly on account of the difficulties which attend the determination of the exact length of the Guz, or yard. The 'Ayeen-i-Akberee' lays down distinctly that the Coss consists of 100 cords (*tunab*), each cord of 50 Guz; also of 400 poles (*ban*), each of 12½ Guz: either of which will give to the Coss the length of 5,000 Guz. The following particulars relative to the distances between the old Minars, or Coss pillars, may be interesting, and may be considered to afford the correctest means we have of ascertaining the true standard.

| | Road distance in English yards. | Direct distance in ditto. |
|---|---|---|
| Octagonal Minar to Nurelah in Delhi ..... | 4,513 | 4,489 |
| Minar between Nurelah and Shapoorgurhee ..... | 4,554 | 4,401 |
| Minar opposite Alecpoor ..... | 4,532 | 4,379 |
| Minar opposite Siruspoor ..... | 4,579 | 4,573 |
| Ruins of Minar opposite to Shalimar ..... | 4,610 | 4,591 |
| Average... | 4,558 | 4,487 |

Length of the Coss = 2 miles, 4 furlongs, 158 yards.

It is important to observe that the length of the Ilahee Guz deduced from these measurements is 32 $\frac{813}{1000}$ inches, showing how very nearly correct is the length of 33 inches assumed by the British Government. The measurements taken to the south of Delhi, between the Minars in the Muttra district, closely correspond. Out of twelve distances it is found that eight give 2 m. 4 f. 19 p. 1 y., three give 2 m. 4 f. 25 p. 3 y., and one gives 2 m. 4 f. 38 p. 2 y. It may be proper to remark that it is frequently supposed that the Minars are set up every two Coss, and that the Coss contained 2,500 yards; but the 'Ayeen-i-Akberee' appears sufficiently explicit on the point. The same work gives the values of the local Coss. It says, 'the Guzerat Coss is the greatest distance at which the ordinary lowing of a cow can be heard, which is determined to be 50 Jureebs, or 15,000 Guz.' This Coss resembles the Chinese *lih*, *i. e.* the distance which can be attained by a man's voice exerted in a plain surface, and in calm weather. Another in Bengal is estimated by plucking a green leaf, and walking with it till it is dry. Another is measured by a hundred steps made by a woman carrying a jar of water on her head, and a child in her arms. All these are very indefinite standards. The same may be remarked of the oriental Meel, as well as the European mile, and league. The two former evidently derive their name from the Roman *Milliare*, and the difference of their value in different places proves that the mere name was borrowed, without any reference to its etymological signification. According to the 'Kamoos,' the oriental Meel is a lax and vague measure, but it has been considered by Dr. Lee to be to the English one, as 139 to 112. The league also, from the German *lugen*, 'to see,' (signifying the distance that can be readily seen by the eye on a plain surface) is as indefinite as a Guzerat, or Gao, and a Bengal, or Dhuppea, Coss, and sufficiently accounts for its varying

standard in Europe. Coss is an Indian word: the equivalent word in Persian is Kuroh, the same as the Sanscrit Krosa, of which four go to the Yojan; about the precise value of which different opinions are held. Bopp ('Nalus,' p. 213) says it is equal to eight English miles. Professor Wilson ('Sanscrit Dictionary,' p. 689) estimates it at nine miles, and says other computations make it about five miles, or even no more than four miles and a half, and, in his commentary on the Chinese travels, estimates it at no higher than four. But these travels enable us to fix the distance with tolerable precision. By following Fa-Hian's route between places of which the identity is beyond question, as between Muttra and Canouje, and between Patna and Benares, we find the Yojan in his time to be as nearly as possible seven English miles; and this agrees much better with what we find the Yojan to be, if we resolve it into its component parts. Eight barley-corns equal a finger, twenty-four fingers equal a Dund, one thousand Dunds equal one Krosa, and four Krosa, one Yojan. Now, estimating the finger's breadth at eight barley-corns, this makes the Yojan equal to six miles, one hundred and six yards, and two feet. It is the generally received opinion that from Coss is derived the word 'course,' used by the European residents of India to represent a promenade, but the 'Corso' of Southern Europe gives a much more probable origin.

"JUREEB' جريب जरीब jarib. A measuring chain, or rope. Before Akber's time it was a rope. He directed it should be made of bamboo with iron joints, as the rope was subject to the influence of the weather. In our survey measurements we use a chain. A Jureeb contains 60 Guz, or 20 Gut,has, and, in the standard measurement of the Upper Provinces, is equal to five chains of 11 yards, each chain being equal to 4 Gut,has. A square of one Jureeb is a Beeg,ha. Till the new system of survey was established, it was usual to measure lands paying revenue to Government with only 18 knots of the Jureeb, which was effected by bringing two knots over the shoulder of the measurer to his waist. Rent-free land was measured with the entire Jureeb of 20 knots. A Jureeb, in Hebrew and Arabic, signified originally only a measure of capacity, equal to 4 Qufeez, or 384 Mud[1] (Latin, *modius*), and in course of time came to signify the portion of land which required as much to sow it as a Jureeb would contain.—(Asasu-l-Loghat). The Pat,ha and Nalee of Gurhwal and Kumaon have a similar origin.

"DHONCHA, دهونچا धौंचा dhonchá. Four and a half. The word is found in Arithmetical Tables of the Multiplication of Fractions, which are in constant use with our Surveying Ameens, when reducing their linear measurements to Beeg,has. The words used by them in Fractional Multiplication are

| | | | | | | |
|---|---|---|---|---|---|---|
| Deorha, | डेवढा | ڈیوڑھا | 1½ | Poncha, | पौंचा | پونچا | 5½ |
| Dhuma, | धमा | دھما | 2½ | K,honcha, | खौंचा | کھونچا | 6½ |
| Honta, | हौंटा | هونٹا | 3½ | Sutoncha, | सतौंचा | ستونچا | 7½ |
| Dhoncha, | धौंचा | دھونچا | 4½ | | | | |

The size of the fields rarely requires Ameens to go beyond this."]

[1] [These words are both retained in the Spanish *cafiz* and *almud*. Indeed, nearly all the Spanish weights and measures are, like very many administrative words, derived from the Arabic:—As the *quintal* of one hundred pounds, from *kintur*: of which the fourth (*ròòba*) is the *arroba; arralde*, a pound, from *arrattl; xeme*, a span, from *shamah*; and so on.—'Al Makkari,' i., p. 500.]

# INDIAN

# CHRONOLOGICAL TABLES.

The object of the present division of our work is to furnish—first, convenient Tables for the Reduction or Comparison of the various Eras in use throughout India; secondly, Tables of Ancient and Modern Dynasties, extracted from such sources as are available for India and the neighbouring countries. There are so many excellent works on these subjects as to leave us nothing more than the task of compilation or rather selection. For information regarding the astronomical and chronological computations of the Hindús, Colebrooke, Bentley, and Warren are the principal authorites. The 'Kála-Sankalita' of the latter author contains the fullest particulars of all the Eras in use. It is from this work that the present tables have been principally taken, with such abridgment as was necessary to bring them within the compass of an octavo volume. Col. Warren's tables of the Hijra being in a less convenient form, we had remodelled them before it came to our knowledge that a complete series for every month of the Muhammadan era, down to A.D. 1900, had been published in Calcutta, forty-four years ago, in 1790. These tables have, however, been long out of print. Playfair's Chronology, in folio, contains also a supplemental table of the Hijra calendar, copied from the celebrated French work, 'L'Art de vérifier les Dates.' There are occasional differences of a day in all tables of the Hijra.

A compendious account of some of the Indian eras was printed as a part of the 'Companion to the Almanac' published by the Society for the Diffusion of Useful Knowledge, for the year 1830. The whole article, however, on the eras of ancient and modern times, is calculated to be of such great utility in this country, both to Europeans who are out of the reach of works of reference or chronology, and to native

students of European literature and history, who have no prior acquaintance with the subject, that we make no apology for reprinting the paper entire, as an introduction to the tables which follow.

## THE ERAS OF ANCIENT AND MODERN TIMES, AND OF VARIOUS COUNTRIES, EXPLAINED; WITH A VIEW TO THE COMPARISON OF THEIR RESPECTIVE DATES.

In the earliest stages of society, some division of time must have been necessary, and some means devised by men in the most savage state, to communicate to each other the period of undertaking, in concert, a hunt or a predatory excursion. But in such a condition the views of men do not extend far, and very limited periods would therefore suffice. The division of day and night, and the scarcely less obvious distinction of new and full moon, might have served to mark the lapse of time for ages; and, although in all climates the alternations of summer and winter, and of wet and dry periods, must have obtruded themselves on the feelings of the most unobserving, it was probably not until the practice of agriculture had afforded men leisure for reflection, that any accurate observations were made on the duration of the seasons, or means used to ascertain the periods of their return. We see, at the present time, that many societies of men, who live only by hunting and fishing, have no exact knowledge of duration of time beyond that of a moon or season, and designate a term of five or of fifty years, equally as a long time. All agricultural nations are aware of the return of the same seasons after a lapse of twelve or thirteen moons; but many years must have elapsed before the length of a solar year was accurately determined. Less civilized nations still continue to compute their time in part by the motions of the moon; and this was the mode of the Greeks, and of the Romans until the correction of Julius Cæsar, but the subject was so little understood even in his time, that an error of several days crept into the Roman calendar soon afterwards, requiring another reformation.

It will render the comparison of eras much easier, if we give some account of what is meant by a solar and a lunar year. A solar year is that space of time during which all the seasons have their course. This takes place in 365 days, 5 hours, 48 minutes, and 49 seconds; and an approximation to that time has been adopted by those nations which have had sufficient astronomical science to determine it. But as it would be impracticable to begin every new year at a different hour of the day, which would be necessary if the perfect year should always be completed before the commencement of a new one, 365 days have been taken as the length of a year, leaving the odd hours and minutes to accumulate until they amount to a whole day, when they are added to the year, making what is called a leap year, or intercalary year, of 366 days. The various ways of doing this will be detailed when we speak of the different eras. Some nations still use a year of 365 days without any intercalation; and this is called a *vague*, or erratic year, because its commencement varies through all the different seasons.

A lunar year consists of 12 moons, or 354 days. This may be convenient enough for short periods, but is so ill adapted for the computation of a civilized nation, that none but Mahometans have continued in the use of it even for a little time. It suits the course of time so ill, that its commencement varies, in a few years, through all the seasons; and many men, amongst the nations which use it, can remember the fasts and festivals altering from summer to winter, and again from winter to summer, and their seed-time and harvest alternately wandering from the beginning of the year to the end.

The luni-solar year is that in which the months are regulated according to the course of the moon, but to which from time to time a month is added, whenever the year would range too widely from its original situation. This year is inconvenient from its varying duration; but as, in a long course of years, the months remain nearly at the same situation, it is less objectionable than the pure lunar year. It was the mode of computation of the Greeks and Romans, and is even now that of the Chinese, Tartars, Japanese, and Jews.

All these varying modes render the comparison of dates much more difficult than it appears to be at the first view. We shall endeavour so far to simplify the calculation as to enable any arithmetician to compute, within a day or two, the eras of every nation, and to reduce them to the Christian era.

### THE ROMAN YEAR.

The Roman year, in its arrangement and division, is that on which our year is entirely founded. The Romans reckoned their time from the date which some of their antiquaries chose to assign for the founding of Rome, viz., the 21st of April, in the 2nd year of the 6th Olympiad, or 754 B.C. This era is designated by the letters A.U.C., or *ab urbe condita*, "from the building of the city." The first year used by them, and attributed to Romulus, consisted of ten months, from March to December, or 304 days. A year exhibiting such a discrepancy from the real course of the seasons could not have remained long in use, and it is supposed that extraordinary months were added as often as it was found necessary. A correction is attributed to his successor Numa, who is said to have added two months to the year, January at the beginning, and February at the end. All these months consisted of 29 or 31 days. The year was lunar, and consequently shorter than the true year; several additions were therefore made, which brought the beginning of the year nearly to the same season, *viz.*, the middle of winter. February subsequently became the second month, which change is alluded to by Ovid.

This computation was followed, with some variation, arising partly from ignorance, and partly from the intrigues of the priests, who had the direction of the calendar, until the time of Julius Cæsar, who, observing that the beginning of the year, instead of occurring in winter, as at first, had now receded to the autumn, ordered that the year A.U.C. 707, or 47 B.C., should consist of 445 days, whereby the following year might begin at the proper time. In order to avoid, in future, the confusion naturally attendant on years of such varied length as those hitherto in use, he determined that the year should be solar, without any reference to the lunar motions. Supposing the natural year to consist of 365 days and 6 hours, he ordered that three years in succession should each consist of 365 days, and the fourth should contain 366 days. He also allotted the respective number of days to each month, precisely as we use to this day. With the exception of July and August, (then called Quintilis and Sextilis, but altered to their present names in honour of Julius and Augustus Cæsar), the names also of the Roman months were similar to ours. The only difference between their calendar and ours was in their mode of counting days, which was backwards instead of forwards. To spare a long explanation, which perhaps might not be sufficiently intelligible to all readers, we shall set down a Roman month, with the days, according to our mode, opposite to each Roman day.

| *English.* | | *Roman.* |
|---|---|---|
| Jan. | 1 | Calends. |
| | 2 | 4th before nones. |
| | 3 | 3d before nones. |
| | 4 | day before nones. |
| | 5 | Nones. |
| | 6 | 8th before Ides. |
| | 7 | 7th ditto. |
| | 8 | 6th ditto. |
| | 9 | 5th ditto. |
| | 10 | 4th ditto. |

| *English.* | *Roman.* |
|---|---|
| Jan. 11 | 3d before Ides. |
| 12 | day ditto. |
| 13 | Ides. |
| 14 | 19th before Cal. of Feb. |
| 15 | 18th ditto. |
| 16 | 17th ditto. |
| 17 | 16th ditto. |
| 18 | 15th ditto. |
| 19 | 14th ditto. |
| 20 | 13th ditto. |
| 21 | 12th ditto. |
| 22 | 11th bef. Cal. of Feb. |
| 23 | 10th ditto. |
| 24 | 9th ditto. |
| 25 | 8th ditto. |
| 26 | 7th ditto. |
| 27 | 6th ditto. |
| 28 | 5th ditto. |
| 29 | 4th ditto. |
| 30 | 3d ditto. |
| 31 | day before Cal. Feb. |

The nones and ides of March, May, July, and October, are two days later than in January, the nones falling on the 7th, and the ides on the 15th of those months; the 2nd of March will be therefore the 6th before the nones, and so on. In all the other months, the calends, nones, and ides hold the same places as in the month of January. In the months which have but 30 days, the number of days before the calends will, of course, be one less, and in February, three less. In leap years, the additional day was inserted in February, as in our calendar; but instead of making a 29th day, the 24th was reckoned twice, and being called in Latin *sexto Cal. Mart.*, (or sixth day before the calends of March,) this, with the addition of bis (twice), gave the name of *bissextile* to the leap year, which it still retains. The first year reckoned on this principle was a leap year. (A.U.C. 708, or 46 B.C.)

Julius Cæsar was killed soon after the reformation of the calendar, and his plan was so little understood, that, instead of making the fourth year a bissextile, a leap year was reckoned every third year, as though the length of the true year had been 365 days 8 hours. This error was discovered 37 years after, at which time thirteen intercalations had taken place instead of ten, and the year began three days too late. The calendar was accordingly again corrected, not by throwing out the three superfluous days at once, but by an order that the twelve following years should be all of 365 days each, and that there should be no leap year until A.U.C. 760, or A.D. 7. From that time the account has been kept without error, and the Roman year has been adopted by almost all Christian nations, with no other variation than taking the birth of Christ as the commencement, instead of the building of Rome.

If the given Roman year be less than 754, deduct it from 754; if the given Roman year be not less than 754, deduct 753 from it; the remainder gives the year (B.C. and A.D., in the first and second cases respectively) in which the Roman year commences.

Ex.—Required the year 780 A.U.C. Required the year 701 A.U.C.

| | | | |
|---|---|---|---|
| deduct | 753 | | 754 |
| | 27 A.D. | | 701 |
| | | | 53 B.C. |

### THE OLYMPIADS.

The Greeks computed their time by the celebrated era of the Olympiads, which date from the year 776 B.C., being the year in which Corœbus was successful at the Olympic games. This era differed from all others in being reckoned by periods of four years instead of single years. Each period of four years was called an Olympiad, and in marking a date, the year and Olympiad were both mentioned. The year was luni-solar, of 12 or 13 months. The names of the months varied in the different states of Greece, but the Attic months are most usual. They are as follows:—

| | |
|---|---|
| Hecatombeon, | Gamelion, |
| Metageitnion, | Anthesterion, |
| Boedromion, | Elaphebolion, |
| Pyanepsion, | Munychion, |
| Mœmacterion, | Thargelion, |
| Poseideon, | Seirophorion. |

In the year of 13 months, the additional month was inserted after Poseideon, and called the second Poseideon.

The months consisted of 30 and 29 days alternately, and the short year in consequence contained 354 days, while the intercalary year had 384. The third year of the first Olympiad consisted of 13 months, and the first and fourth years of the second Olympiad were also intercalary; consequently in the first Olympiad there were 1,446 days, and in the second 1,476, making together 2,922, exactly equal to eight Julian years: this mode of intercalation would therefore precisely bring about the commencement of the ninth year to the same season, as that of the first year. But as the Olympic months followed the course of the moon, and 99 such months contained 2,923½ days, the moon was in consequence a day and a half in advance of the reckoning. The error was, however, allowed to accumulate until it reached three days, which was in four Olympiads, or sixteen years, to the last of which three days were added. This corrected the errors with respect to the moon, but it threw out the commencement of the year, as regarded the seasons, making it three days too late. No means were adopted to remedy this until the fortieth Olympiad, the last year of which was made to consist of 12 months only, instead of 13 as usual, and the forty-first Olympiad began with the same days of the moon and sun as the first had done 160 years before. By this reckoning, the year always began between the new and full moon before or after the summer solstice, though more commonly after; and it continued in use until 432 B.C. or fourth year of the eighty-sixth Olympiad, when the cycle of 19 years was invented by Meton. This astronomer found that the Attic months no longer followed the course of the moon, but that the new moon nearest the summer solstice, which should have been the first day of the 87th Olympiad, would actually take place on the 13th day of Seirophorion, in the 4th year of the 86th Olympiad. He therefore proposed to commence the 87th Olympiad from that day, and to adopt a new system of intercalation. He supposed 235 moons to be exactly equal to 19 solar years, and that in every period of 19 years, the new and full moons would recur regularly at the same seasons. Nineteen years of 12 moons each would contain 228 moons, and consequently 7 moons were to be added. These were inserted in the 3d, 5th, 8th, 11th, 13th, 16th, and 19 years. Instead also of making the months of 30 and 29 days alternately, he determined that each month should consist nominally of 30 days, but that every 63d day should be omitted in numbering. The third day of Boedromion, for example, was omitted in the first year, the 6th of Poseideon, and so on to the end of the nineteenth year, when the last exemptile day (the 3d of Thargelion) was retained, making that year to consist of 385 days. This cycle was in use above a century, but was not quite accurate; 19 solar years are equal to about 6,939 days, 14 hours and a half, and 235 lunations to 6,939 days, 16 hours and a half, or 2 hours more. In the year 330 B.C. this excess amounted to only 11 hours; but by the cycle of Meton, to above 52 hours, he having made 19 years equal to 6,940 days; when another astronomer, Calippus, having made several observations on the solstice, calculated that the excess made 1 day in 76 years. He, therefore, invented the cycle of 76 years, called from him the Calippian, which consisted of 27,759 days, exactly equal to 76 Julian years, but above 14 hours in excess of the true solar year. In this period were included 940 lunations, equal to 27,758¾ days.

The system of Calippus began in the 8th year of the Metonic cycle (330 B.C.), and is frequently referred to as a date by Ptolemy. It is supposed that he altered the periods of inserting the intercalary months, but this is doubtful. The system of Calippus continued in use as long as the Olympiads were employed, and was exactly equal to the Julian, on an average of years.

To reduce the date by Olympiads to our era, multiply the past Olympiad by four, and add the odd years. Subtract the sum from 777 if before Christ, and subtract 776 from the sum if after Christ, the remainder will be the beginning of the given year; to decide on the exact day would be very difficult, on account of the alterations which the system has undergone. It will be, perhaps, sufficient to observe that the year begins within a fortnight of the middle of July.

### THE CHRISTIAN ERA.

The Christian era, used by almost all Christian nations, dates from January 1st, in the middle of the fourth year of the 194th Olympiad, in the 753rd of the building of Rome, and 4714th of the Julian period. It was first introduced in the sixth century, but was not very generally employed for some centuries after.

The Christian year in its division follows exactly the Roman year, consisting of 365 days for three successive years, and of 366 in the fourth year, which is termed leap year. This computation subsisted for 1,000 years throughout Europe without alteration, and is still used by the followers of the Greek Church; other Christians have adopted a slight alteration, which will be shortly explained. The simplicity of this form has brought it into very general use, and it is customary for astronomers and chronologists, in treating of ancient times, to date back in the same order from its commencement. There is, unfortunately, a little ambiguity on this head, some persons reckoning the year immediately before the birth of Christ, as 1 B.C., and others noting it with 0, and the second year before Christ with 1, making always one less than those who use the former notation. The first is the most usual mode, and will be employed in all our computations.

The Christian year (or Julian year), arranged as we have shewn, was 11′ 11″ too long, amounting to a day in nearly 129 years; and towards the end of the sixteenth century, the time of celebrating the church festivals had advanced ten days beyond the periods fixed by the council of Nice in 325. It was in consequence ordered, by a Bull of Gregory XIII., that the year 1582 should consist of 355 days only, which was effected by omitting ten days in the month of October, viz., from the 5th to the 14th. And, to prevent the recurrence of a like irregularity, it was also ordered, that in three centuries out of four, the last year should be a common year, instead of a leap year, as it would have been by the Julian calendar. The year 1600 remained a leap year, but 1700, 1800, and 1900 were to be common years. This amended mode of computing was called the New Style, and was immediately adopted in all Catholic countries, while the Old Style continued to be employed by other Christians. Gradually the New Style was employed by Protestants also. The last ten days of 1699 were omitted by the Protestants of Germany, who, in consequence, began the year 1700 with the New Style; and in England the reformed calendar was adopted in the year 1752, by omitting eleven days, to which the difference between the styles then amounted. The alteration was effected in the month of September, the day which would have been the third being called the fourteenth. The Greeks and Russians still use the Old Style.

To turn the Old Style to the New,—

From the alteration of style to the 29th February, 1700, add 10 days.

From 1st March, 1700, to 29th February..... . ...1800, add 11 days.
" " 1800, " .. .....1900, " 12 days.
" " 1900, " .....2100, " 13 days.

Examples:—17th March, 1801, O.S. is 29th March, 1801, N.S.
19th Feb., 1703, O.S. is 2nd March, 1703, N.S.
24th Dec., 1690, O.S. is 3rd Jan., 1691, N.S.
20th Dec., 1829, O.S. is 1st Jan., 1830, N.S.

There will sometimes be a difference of one year in a date, from the circumstance that, in many countries, the time of beginning the year has varied. In England, until the year 1752, the year was considered to begin on the 25th of March; any date, therefore, from the 1st of January to the 24th of March, will be a year too little. It had been the practice for many years preceding the change of style to write both years, by way of obviating mistakes, as 1st of February, $170\frac{7}{8}$ or 1707-8, meaning the year 1708 if begun in Jan., or 1707 if begun in March.

In some countries, Easter-day was the first day of the year, in others the 1st of March, and in others, again, Christmas-day; but no certain rule can be given, as even in the same nation different provinces followed a different custom. The day of the week is, however, frequently added in old dates, which will at once clear up the ambiguity, the day of the week answering to any given date.

All nations, at present using either the Old or New Style begin the year on the 1st of January.

The Creation has been adopted as an epoch by Christian and Jewish writers, and would have been found very convenient, by doing away with the difficulty and ambiguity of counting before and after any particular date, as is necessary when the era begins at a later period. But, unfortunately, writers are not agreed as to the precise time of commencing. We consider the Creation as taking place 4004 years B.C.; but there are about a hundred and forty different variations in this respect. The following are those that have been most generally used:—

### THE ERA OF CONSTANTINOPLE.

In this era the Creation is placed 5508 years B.C. It was used by the Russians until the time of Peter the Great, and is still used in the Greek Church. The civil year begins the first of September, and the ecclesiastical towards the end of March: the day is not exactly determined.

To reduce it to our era, subtract 5508 years from January to August and 5509 from September to the end.

### ERA OF ANTIOCH, AND ERA OF ALEXANDRIA.

We place these together, because, although they differed at their formation by 10 years, they afterwards coincided. They were both much in use by the early Christian writers attached to the churches of Antioch and Alexandria. In the computation of Alexandria, the Creation was considered to be 5502 years before Christ, and, in consequence, the year 1 A.D. was equal to 5503. This computation continued to the year 284 A.D., which was called 5786. In the next year (285 A.D.), which should have been 5787, ten years were discarded, and the date became 5777. This is still used by the Abyssinians.

The era of Antioch considered the Creation to be 5492 years before Christ; and therefore the year 285 A.D. was 5777. As this was equal to the date of Alexandria, the two eras, from this time, were considered as one.

Dates of the Alexandrian era are reduced to the Christian era by subtracting 5502 until the year 5786, and after that time by subtracting 5492.

In the era of Antioch 5492 are always subtracted.

### THE ABYSSINIAN ERA.

The Abyssinians reckon their years from the Creation, which they place in the 5,493rd year before our era,[1] on the 29th of August, Old Style; and their dates will consequently exceed ours by 5492 years and 125 days. They have 12 months of 30 days each, and 5 days added at the end, called Pagomen, from the Greek word *ἐπαγομεναι, added.* Another day is added at the end of every fourth year. To know which year is leap year, divide the date by 4, and if 3 remain, the year will be leap year. It always precedes the Julian leap year by one year and four months. The following are names of the months, with their beginnings referred to the Old Style:—

| | |
|---|---|
| Mascaram .....29th August. | Miyazia .....27th March. |
| Tekemt .....28th September. | Genbot .....26th April. |
| Hedar .....28th October. | Sene .....26th May. |
| Tahsas .....27th November. | Hamle .....25th June. |
| Ter .....27th December. | Nahasse .....25th July. |
| Yacatit.....26th January. | Pagomen .....24th August. |
| Magabit .....25th February. | |

To reduce Abyssinian time to the Julian year, subtract 5492 years and 125 days.

The Abyssinians also use the era of Martyrs, or Dioclesian, with the same months as in the above.

### THE JEWISH ERA.

The Jews usually employed the era of the Seleucides until the fifteenth century, when a new mode of computing was adopted by them. Some insist strongly on the antiquity of their present era; but it is generally believed not to be more ancient than the century above named.

They date from the Creation, which they consider to have been 3760 years and 3 months before the commencement of our era. Their year is luni-solar, consisting either of 12 or 13 months each, and each month of 29 or 30 days. The civil year commences with or immediately after the new moon following the equinox of autumn. The months, with the number of days in each, are as follows:—

| | | | | | |
|---|---|---|---|---|---|
| 1 | Tisri..... | 30 days | | (Veadar) ..... | 29 days |
| 2 | Marchesvan..... / Chesvan or Bul ... | 29 or 30 | 7 | Nisan, or Abib..... | 30 |
| 3 | Chisleu..... | 29 or 30 | 8 | Jyar, or Zius ..... | 29 |
| 4 | Thebet..... | 29 | 9 | Sivan ..... | 30 |
| 5 | Sebat ..... | 30 | 10 | Thammuz ..... | 29 |
| 6 | Adar..... | 29 | 11 | Ab ..... | 30 |
| | | | 12 | Elul..... | 29 |

And in intercalary years, 30.

The month Veadar is omitted in years of 12 months.

The average length of the year of 12 months is 354 days; but, by varying the length of Marchesvan and Chisleu, it may consist of 353 or 355 days also. In the same manner, the year of 13 months may contain 383, 384, or 385 days. In 19 years, 12 years have 12 months each, and 7 years 13 months. The following table of 19 years will show the number of months in each year, as well as the first day of their year, reduced to the New Style: the first day will not always be quite accurate,

[1] The Abyssinians place the birth of Christ in the 5,500th year of the Creation, and consequently eight years after our era.

as certain lucky and unlucky days require the postponement of a day in some years. The year must be divided by 19, and the remainder will shew the year of the cycle. If there be no remainder, it is the nineteenth year.

| YEAR OF THE CYCLE. | | | | MONTHS. |
|---|---|---|---|---|
| The 1st begins about the | 2nd | of | October, and consists of | 12 |
| 2nd | 22nd | of | September | 12 |
| 3rd | 10th | „ | | 13 |
| 4th | 29th | „ | | 12 |
| 5th | 19th | „ | | 12 |
| 6th | 8th | „ | | 13 |
| 7th | 27th | „ | | 12 |
| 8th | 16th | „ | | 13 |
| 9th | 5th | of October | | 12 |
| 10th | 25th | of September | | 12 |
| 11th | 14th | „ | | 13 |
| 12th | 2nd | of October | | 12 |
| 13th | 21st | of September | | 12 |
| 14th | 10th | „ | | 13 |
| 15th | 29th | „ | | 12 |
| 16th | 18th | „ | | 12 |
| 17th | 7th | „ | | 13 |
| 18th | 25th | „ | | 12 |
| 19th | 14th | „ | | 13 |

To reduce the Jewish time to ours, subtract 3761, and the remainder will show the year: the beginning of the year may be ascertained by the above table, and the months must be counted from that time.

Example—Required the 1st of Chisleu 5588.

| | |
|---|---|
| 5588 | 19)5588(294 |
| 3761 | 38 |
| 1827 | 178 |
| | 171 |
| | 78 |
| | 76 |
| | 2 |

The remainder shews the year 5588 to be the second of the cycle, and consequently to begin on the 22nd of September. The 1st of Chisleu will therefore be about the 20th of November, 1827.

The ecclesiastical year begins six months earlier, with the month of Nisan. Consequently, when the given year is ecclesiastical, deduct a year in the date from Nisan to Elul, inclusive.

The Jews frequently in their dates leave out the thousands, which they indicate by placing the letters לבק meaning לפי קטנות "according to the lesser computation."

(It will be unnecessary to mention the various other epochs that have taken place from the Creation, as those detailed are the only ones that have been in general use.)

### THE ERA OF NABONASSAR

received its name from that of a prince of Babylon, under whose reign astronomical studies were much advanced in Chaldæa. The years are vague, containing 365 days each, without intercalation. The first day of the era was Wednesday,[1] 26th February, 747 B.C.

[1] This is said, by mistake, to be Thursday, in 'L'Art de vérifier les Dates.'

To find the day of any Julian year on which the year of Nabonassar begins, subtract the given year, if before Christ, from 748, and, if after Christ, add it to 747. Divide the result by 4, omitting fractions, and subtract the quotient from 57 (*i.e.* the number of days, from January 1 to February 26). If the quotient exceed 57, add 365 as often as necessary, before subtraction. The remainder will be the day of the year given. The first result before the division by 4, increased by a unit for each 365 added to 57, will be the year of Nabonassar then beginning.

The day of the week on which the year of Nabonassar begins may be known by dividing by 7. If there be no remainder, the day will be Tuesday; if there be a remainder, the day placed below it in the following table will be the day required.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Tu. | W. | Th. | F. | Sa. | Su. | M. |

As the above stated rule may be one day in error from the omission of fractions, it may be corrected by the help of this little table.

The year of Nabonassar being given, to find when it begins.

Rule.—Divide the year by 4: subtract the quotient from 57, adding 365, if necessary, as before; the remainder will be the number of days from the 1st of January.

The given year diminished as often as 365 has been added, will shew the number of Julian years from 747 B.C. If it be less than 748, subtract from that number, and the remainder will be the year before Christ: if equal, or more, subtract 747 from it, and the remainder will be the year after Christ.

### THE EGYPTIAN ERA.

The old Egyptian year was identical with the era of Nabonassar, beginning on the 26th February, 747 B.C., and consisting of 365 days only. It was reformed thirty years before Christ, at which period the commencement of the year had arrived, by continually receding, to the 29th August, which was determined to be in future the first day of the year. Their years and months coincide exactly with those of the era of Dioclesian.

It appears from a calculation, that in 30 B.C., the year must have begun on the 31st of August; in which case we must suppose the reformation to have taken place eight years earlier: however that may be, it is certain that the 29th of August was the day adopted, and the number of the year one more than would have resulted from taking 747 as the commencement of the era.

To reduce to the Christian era, subtract 746 years 125 days.

The old Egyptian year was in use for above a century after Christ; the reformed year being at first used only by the Alexandrians.

### THE JULIAN PERIOD

is a term of years produced by the multiplication of the lunar cycle 19, solar cycle 28, and Roman indiction 15. It consists of 7980 years, and began 4713 years before our era. It has been employed in computing time, to avoid the puzzling ambiguity attendant on reckoning any period antecedent to our era, an advantage which it has in common with the mundane eras used at different times.

By subtracting 4713 from the Julian period, our year is found. If before Christ, subtract the Julian period from 4714.

### THE ERA OF DIOCLESIAN, CALLED ALSO THE ERA OF MARTYRS,

was much used by Christian writers until the introduction of the Christian era in the

sixth century, and is still employed by the Abyssinians and Copts. It dates from the day[1] when Dioclesian was proclaimed Emperor, at Chalcedon, 29th August, 284. It is called the Era of Martyrs, from the persecution of the Christians in the reign of Dioclesian. The year consists of 365 days, with an additional day every fourth year. Divide the date by 4, and if 3 remain the year is bissextile. It contains 12 months of 30 days each, with five additional in common years, and six in leap years.

The Coptic months are as follow, with the corresponding time according to the Julian Calendar.

| COPTIC. | ARABIC. | | COPTIC. | ARABIC. | |
|---|---|---|---|---|---|
| Thoth | Tot | Aug. 29. | Phamenoth | Buramat | Feb. 25. |
| Paophi | Babe | Sept. 28. | Pharmouti | Barmude | March 27. |
| Athyr | Hatur | Oct. 28. | Pashons | Bashans | April 26. |
| Cohiac | Kyak | Nov. 27. | Payni | Baune | May 26. |
| Tybi | Tobe | Dec. 27. | Epiphi | Abib | June 25. |
| Mesir | Mashir, Amshir | Jan. 26. | Mesori | Meshri | July 25. |

The additional days are called, by the modern Copts, Nisi in common years, and Kebus in leap years; by the ancient Copts Piabotnkuji, and in Arabic Biabotanquji.

The Abyssinian names are given under the head of Abyssinia.

To reduce the years of this era to those of the Christian, add 283 years 240 days.

When the Dioclesian year is the year after leap year, it begins one day later than usual, and in consequence one day must be added to the Christian year, from the 29th August to the end of the following February.

### THE GRECIAN ERA, OR ERA OF THE SELEUCIDES,

dates from the reign of Seleucus Nicator, 311 years and 4 months before Christ. It was used in Syria for many years, and frequently by the Jews until the 15th century, and by some Arabians to this day. The Syrian Greeks began their year about the commencement of September; other Syrians in October, and the Jews about the Autumnal Equinox. We shall not pretend to great accuracy in this era, the opinions of authors being very various as to its commencement.

It is used in the book of the Maccabees, and appears to have begun with Nisan.

Their year was solar, and consisted of 365 days, with the addition of a day every fourth year.

To reduce it to our era, supposing it to begin 1st September, 312 B.C., subtract 311 years and four months.

The following are the months used by the Greeks and Syrians, with the corresponding Roman months.

| SYRIAN. | MACEDONIAN. | ENGLISH. |
|---|---|---|
| Elul | Gorpiæus | September. |
| Tishrin I. | Hyperberetæus | October. |
| Tishrin II. | Dius | November. |
| Canun I. | Apellæus | December. |
| Canun II. | Audynæus | January. |
| Shubat | Peritius | February. |
| Adar | Dystrus | March. |
| Nisan | Xanticus | April. |
| Ayar | Artemisius | May. |
| Haziran | Dæsius | June. |
| Tamus | Panæmus | July. |
| Ab | Lous | August. |

[1] Dioclesian was not in reality proclaimed until some months after this time.

### THE DEATH OF ALEXANDER THE GREAT

dates from the 12th of November, 324 B.C.,[1] on which day the 425th year of Nabonassar began. This era was computed by years of 365 days, with a leap year of 366 every four years, like the Julian year. The months were of 30 days each, with 5 additional. To compute it, deduct 323 from the given year, and the remainder will be the year of the Christian era. If before Christ deduct the year from 324.

### THE ERA OF TYRE

began the 19th of October, 125 B.C., with the month Hyperberetæus. The months were the same as those used in the Grecian era. The year is similar to the Julian.

To reduce it to our era, subtract 124; and if the given year be less than 125, deduct it from 125, and the remainder will be the year before Christ.

### THE CESAREAN ERA OF ANTIOCH

was used, in Syria, by Greeks and Syrians. The months are the same as those given under the Grecian era. The Greeks began with Gorpiæus, in the year 49 B.C., and the Syrians with Tishrin I. of 48 B.C.

### THE ERA OF ABRAHAM

is used by Eusebius, and begins the 1st of October, 2016 B.C. To reduce this to the Christian era, subtract 2015 years 3 months, and the remainder will be the year and month.

### THE SPANISH ERA, OR ERA OF THE CÆSARS,

is reckoned from 1st of January, 38 years B.C., being the year following the conquest of Spain by Augustus; it was much used in Africa, Spain, and the South of France. By a Synod held in 1180, its use was abolished in all the churches dependent on Barcelona. Pedro IV. of Arragon abolished the use of it in his dominions in 1350. John I. of Castile did the same in 1382. It continued to be used in Portugal until 1455.

The months and days of this era are identical with those of the Julian Calendar; and, consequently, to turn this time into that of our era, we have only to subtract 38 from the year. Thus the Spanish year 750 is equal to the Julian 712. If the year be before the Christian era, subtract it from 39.

### THE ERA OF YEZDEGIRD III., OR THE PERSIAN ERA,

was formerly universally adopted in Persia, and is still used by the Parsees in India, and by the Arabs, in certain computations. This era began on the 16th of June, A.D. 632. The year consisted of 365 days only, and therefore its commencement, like that of the old Egyptian and Armenian year, anticipated the Julian year by one day in every four years. This difference amounted to nearly 112 days in the year 1075, when it was reformed by Jelaledin, who ordered that in future the Persian year should receive an additional day whenever it should appear necessary to postpone the commencement of the following year, that it might occur on the day of the sun's passing the same degree of the ecliptic. This took place generally once in four years; but,

[1] This would be more accurately 323 B.C., but the above date is more usually adopted.

after seven or eight intercalations, it was postponed for a year. It will be observed that such an arrangement must be perfect, and that this calendar could never require reformation; but it has the inconvenience of making it very difficult to determine beforehand the length of any given year, as well as that of causing a difference occasionally in the computation of persons living under different meridians; those living towards the east sometimes beginning their year a day after others more westwardly situate; the sun rising in the old sign to those in the former situation, who consequently continued in the old year another day; while the others, having their sun rise in the new sign, began a new year. The present practice of the Parsees in India varies in different provinces, some beginning the year in September, and others in October. The months are as follows: they have each thirty days, and the intercalation of five or six days occurs at the end of Aban.

| | | |
|---|---|---|
| Ferwardin, | Merdad, | Ader, |
| Ardibehisht, | Sheriur, | Dei, |
| Khurdad, | Meher, | Behmen, |
| Tir, | Aban, | Ispendarmez. |

To reduce this era to the Christian year, add 630 to the given year, and the sum will be the year of our era in which the year begins, according to the practice of the Parsees.

Every day of the Persian month has a different name.

### THE ERA OF THE ARMENIANS.

The Armenians began their era on Tuesday, the 9th of July, A.D. 552. Their year consists of 365 days only, and therefore anticipates the Julian one day in every four years.

To know the day of the week on which the Armenian year begins, divide the year by 7; if there be no remainder, the year begins on a Monday; if there be a remainder, the day put under it in this table will be the first of the year.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| M | Tu. | W. | Th. | F. | Sa. | Su. |

To reduce the Armenian year to the Julian, divide the given date by 4, and subtract the quotient from 191, adding 365 to 191 if necessary; the remainder will be the days from the beginning of the Julian year, and the Armenian date (diminished by 1, if 365 has been added to 191) added to 551, will give the Christian year.

The Armenian ecclesiastical year begins on the 11th of August, and has an additional day at the end of every fourth year; and consequently coincides in division with the Julian year.

To reduce ecclesiastical Armenian years to our time, add 551 years and 222 days.

In leap years, subtract one day from March 1 to August 10.

NOTE.—The Armenians frequently use the old Julian style and months in their correspondence with Europeans.

### THE FRENCH REVOLUTIONARY CALENDAR.

In the year 1792, the French nation, in their excessive desire to change all existing institutions, determined on the adoption of a new calendar, founded on philosophical principles. But as they were unable to produce any plan more accurate and convenient than that which was previously in use, they were contented to follow the old plan under a different name, merely changing some of the minor details and subdivisions, and commencing the year at a different time.

The first year of the era of the Republic began on the 22nd of September, 1792, N.S., the day of the autumnal equinox. There were twelve months in each year of thirty days each, and five additional days at the end, celebrated as festivals. The fourth year was a leap year, called by the French an Olympic year. The months and additional festivals were as follow:—

| | |
|---|---|
| Vendémiaire began 22 Sep. | Germinal began 21 March. |
| Brumaire ..... 22 Oct. | Floréal..... 20 April. |
| Frimaire..... 21 Nov. | Prairial ..... 20 May. |
| Nivôse ..... 21 Dec. | Messidor..... 19 June. |
| Pluviôse ..... ..... 20 Jan. | Thermidor ..... 19 July. |
| Ventôse ..... 19 Feb. | Fructidor ..... 18 August. |
| Festival of Virtue, 17 Sep. | Festival of Opinion, 20 Sept. |
| „ Genius, 18 „ | „ Rewards, 21 „ |
| „ Labour, 19 „ | |

In Olympic years, from the 11th Ventôse (which was on the 29th of February) to the end of the year, each day answered to one day earlier than in other years; thus Germinal began on the 20th of March.

The months were divided into decades of ten days each, instead of weeks. These were the names of their days.

| | | |
|---|---|---|
| Primidi, | Quintidi, | Octodi, |
| Duodi, | Sextidi. | Novidi, |
| Tridi, | Septidi, | Decadi. |
| Quartidi, | | |

As this plan lasted so short a time, it will take less space to insert a table of years corresponding with the Christian era, than to give a rule for the deduction of one era from another.

| | | | |
|---|---|---|---|
| 1 | 1792–3 | 8 | 1799–1800 |
| 2 | 1793–4 | 9 | 1800–1801 |
| 3 | 1794–5 | 10 | 1801–2 |
| 4 | 1795–6 | 11 | 1802–3 |
| 5 | 1796–7 | 12 | 1803–4 |
| 6 | 1797–8 | 13 | 1804–5 |
| 7 | 1798–9 | 14 | 1805–6 |

### THE MAHOMETAN ERA, OR ERA OF THE HEGIRA.

dates from the flight of Mahomet to Medina, which took place in the night of Thursday, the 15th July, A.D. 622. The era commences on the following day, viz. the 16th July. Many chronologists have computed this era from the 15th of July, but Cantemir has given examples, proving that, in most ancient times, the 16th was the first day of the era; and now there can be no question that such is the practice of Mahometans. The year is purely lunar, consisting of twelve months, each month commencing with the appearance of the new moon, without any intercalation to bring the commencement of the year to the same season. It is obvious that, by such an arrangement, every year will begin much earlier in the season than the preceding, being now in summer, and, in the course of sixteen years, in the winter. Such a mode of reckoning, so much at variance with the order of nature, could scarcely have been in use beyond the pastoral and semi-barbarous nation by whom it was adopted, without the powerful aid of fanaticism; and even that has not been able to prevent the use of other methods by learned men in their computations, and by governments in the collection of revenue. It will also be remarked that, as the Mahometans begin each month with the appearance of the new moon, a few cloudy days might retard the commencement of a month, making the preceding month longer than usual. This, in

fact, is the case, and two parts of the same country will sometimes differ a day in consequence; although the clear skies of those countries where Islamism prevails, rarely occasion much inconvenience on this head. But in chronology and history, as well as in all documents, they use months of thirty and twenty-nine days, alternately, making the year thus to consist of 354 days: eleven times in thirty years, one day is added to the last month, making 355 days in that year. Consequently, the average length of a year is taken at $354\frac{11}{30}$ days, the twelfth of which is $29\frac{191}{360}$, differing from the true lunation very little more than three seconds, which will not amount to a day in less than 2260 years, a degree of exactness which could not have been attained without long continued observations.

The intercalary year of 355 days occurs on the second, fifth, seventh, tenth, thirteenth, fifteenth, eighteenth, twenty-first, twenty-fourth, twenty-sixth, and twenty-ninth years of every thirty years. Any year being given, to know whether it be intercalary or not, divide by thirty, and if either of the above numbers remain, the year will be one of 355 days.

The names of the months, as used by the Turks, with the length of each, are as follow:—

| | | | |
|---|---|---|---|
| Moharem | 30 | Regeb | 30 |
| Saphar | 29 | Shaban | 29 |
| Rabiu I | 30 | Ramadan | 30 |
| Rabiu II | 29 | Shawall | 29 |
| Jomadhi I | 30 | Dhu'l kadah | 30 |
| Jomadhi II | 29 | Dhu'l hajjah | 29 |

And in intercalary 30 days.

They have weeks of seven days, named as follow:—

| | TURKS. | PERSIANS. | INDIANS. | ANC. ARABIC. | MOD. ARABIC. |
|---|---|---|---|---|---|
| Su. | Pazar gun | Yekshambe | Etwar | Bawal | Yom ahad. |
| M. | Pazar ertesi | Doshambe | Peer or Somwar | Bahun | Yom Thena. |
| Tu. | Sale | Sishambe | Mungul | Jebar | Yom tulta. |
| W. | Charshambe | Charshambe | Boodh | Dabar | Yom arba. |
| Th. | Pershambe | Panjshambe | Jumerat | Femunes | Yom hamsa. |
| F. | Juma | Juma or Adina | Juma | Aruba | Juma. |
| Sa. | Juma ertesi | Shambe or Hafta | Sunneecher | Shiyar | Sabt. |

## THE CHINESE,

like all the nations of the north-east of Asia, reckon their time by cycles of 60 years; instead of numbering them as we do, they give a different name to every year in the cycle. As all those nations follow the same system, we shall detail it here more particularly. They have two series of words, one of ten, and the other of twelve words; a combination of the first words in both orders is the name of the first year; the next in each series are taken for the second year; and so to the tenth: in the eleventh year, the series of ten being exhausted, they begin again with the first, combining it with the eleventh of the second series; in the twelfth year, the second word of the first series is combined with the twelfth of the second; for the thirteenth year, the combination of the third word of the first list with the first of the second list is taken, that list also being now exhausted. To make this clearer, we shall designate

the series of ten by the Roman letters, that of twelve by the italics, and the whole cycle of 60 will stand thus.

| | | | |
|---|---|---|---|
| 1 a *a* | 16 f *d* | 31 a *g* | 46 f *k* |
| 2 b *b* | 17 g *e* | 32 b *h* | 47 g *l* |
| 3 c *c* | 18 h *f* | 33 c *i* | 48 h *m* |
| 4 d *d* | 19 i *g* | 34 d *k* | 49 i *a* |
| 5 e *e* | 20 k *h* | 35 e *l* | 50 k *b* |
| 6 f *f* | 21 a *i* | 36 f *m* | 51 a *c* |
| 7 g *g* | 22 b *k* | 37 g *a* | 52 b *d* |
| 8 h *h* | 23 c *l* | 38 h *b* | 53 c *e* |
| 9 i *i* | 24 d *m* | 39 i *c* | 54 d *f* |
| 10 k *k* | 25 e *a* | 40 k *d* | 55 e *g* |
| 11 a *l* | 26 f *b* | 41 a *e* | 56 f *h* |
| 12 b *m* | 27 g *c* | 42 b *f* | 57 g *i* |
| 13 c *a* | 28 h *d* | 43 c *g* | 58 h *k* |
| 14 d *b* | 29 i *e* | 44 d *h* | 59 i *l* |
| 15 e *c* | 30 k *f* | 45 e *i* | 60 k *m* |

The series of 10 is designated in China by the name of tëen kan, or celestial signs. Their names are—1, kêa; 2, yĭh; 3, ping; 4, ting; 5, woo; 6, ke; 7, kang; 8, sin; 9, jin; 10, kwey.

The series of 12 are the horary characters, and are named teche, terrestrial signs. Their names are—1, toze; 2, chow; 3, yin; 4, maou; 5, shin; 6, sze; 7, woo; 8, we; 9, shin; 10, yew; 11, seŏ; 12, hae.

These characters being substituted for their equivalent letters in the cycle, will show the Chinese name of every year; for example, kia tzse is the first year; kang yin, the 27th.

The Chinese months are lunar, of 29 and 30 days each. Their years have ordinarily 12 months, but a thirteenth is added whenever there are two new moons while the sun is one sign of the Zodiac. This will occur seven times in nineteen years.

The boasted knowledge of the Chinese in astronomy has not been sufficient to enable them to compute their time correctly. In 1290 A.D., the Arab Jemaleddin composed a calendar for them, which remained in use until the time of the Jesuit Adam Schaal, who was the director of their calendar until 1664. It then remained for five years in the hands of the natives, who so deranged it, that when it was again submitted to the direction of the Christians, it was found necessary to expunge a month to bring the commencement of the year to the proper season. It has since that time been almost constantly under the care of Christians.

The first cycle, according to the Romish Missionaries, began February 2397 B.C.[1] We are now, therefore, in the 71st cycle, the 27th of which will begin in 1830. To find out the Chinese time, multiply the eclipsed cycle by 60, and add the odd years; then, if the time be before Christ, subtract the sum from 2398; but if after Christ, subtract 2397 from it; the remainder will be the year required.

The Chinese frequently date from the year of the reigning sovereign, and in that case there is no way of having the corresponding date but by a list of Emperors. We subjoin a list of those who have reigned for the last two centuries.

[1] Dr. Morrison carries it back to the 61st year of Hwang-te, 2596 B.C., making the present year to fall in the 74th cycle; but, according to the celebrated historian Choo-foo-tsze, Hwang-te reigned about 2700 B.C., making 75½ cycles from that period, which is, probably, more correct than either of the above statements.

TARTAR DYNASTY.

| | | |
|---|---|---|
| He-tsung began to reign | A.D. | 1616. |
| Chwang-lëë | | 1627. |
| Shun-che | | 1644. |
| Kang-he | | 1662. |
| Yung-ching | | 1723. |
| Këen-lung | | 1736. |
| Kea-king | | 1796. |
| Taou-kwang | | 1821, now Emperor. |

THE JAPANESE

have a cycle of 60 years, like that of the Chinese, formed by a combination of words of two series. The series of ten is formed of the names of the elements, of which the Japanese reckon five, doubled by the addition of the masculine and feminine endings, je and to.

| | | |
|---|---|---|
| 1 | kino-je | wood. |
| 2 | kino-to, | |
| 3 | fino-je | fire. |
| 4 | fino-to | |
| 5 | tsutsno-je, | earth. |
| 6 | tsutsno-to, | |
| 7 | kanno-je, | metal. |
| 8 | kanno-to, | |
| 9 | midsno-je, | water. |
| 10 | midsno-to, | |

The series of 12 is made up of the signs of the Zodiac.

| | |
|---|---|
| 1 | ne, rat. |
| 2 | oos, ox. |
| 3 | torra, tiger. |
| 4 | ov, hare. |
| 5 | tats, dragon. |
| 6 | mi, serpent. |
| 7 | ooma, horse. |
| 8 | tsitsuse, sheep. |
| 9 | sar, ape. |
| 10 | torri, hen. |
| 11 | in, dog. |
| 12 | y, hog. |

By substituting these words for the letters in the cycle, under the head of China, the Japanese names are found. Thus, the first year of the cycle is called kino-je ne, the 35th, tsutsno-je in, and so on. The cycles coincide with those of the Chinese; but a name is given to them instead of numbering them. Their years begin in February, and are luni-solar, of 12 and 13 months, with the intercalation as before mentioned under the head of China. The first cycle is said to begin 660 B.C.; but this cannot be correct, unless some alteration has taken place, as the Chinese cycle then began 657 B.C. We know, however, too little of Japan to pronounce positively respecting it; but thus far it is certain, that the cycle now coincides with that of the Chinese.

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To an article of this nature, it may not be thought superfluous to append a slight notice of the manner in which some of the aboriginal tribes of America reckoned their time, before its discovery by the natives of Europe. The science of astronomy seems to have advanced there to a much greater extent than is commonly imagined. The extraordinary accuracy of the Mexicans in their computations, surpassing that of the Europeans of their time, cannot be accounted for otherwise than by the supposition that they had derived it from some people more civilized than themselves; and would appear incredible, if not well attested by Spanish authors of the fifteenth century, as well as by many hieroglyphic almanacs yet remaining, of undoubted antiquity. The Peruvians and Muyscas had lunar years of great accuracy also; but this is less surprising, as the phases of the moon are sufficiently visible to the eye, and their returns frequent. We shall detail that of the Mexicans only.

The year of the Mexicans consisted of 365 days; it was composed of eighteen

months of twenty days each, and five additional, called *nemontemi*, or void. At the end of a cycle of fifty-two years, thirteen days were added; and at the end of another cycle, twelve days, and so on alternately, making an addition of twenty-five days in 104 years. This made the mean year to consist of 365 days, 5 hours, 46 minutes, $9\frac{3}{13}$ seconds, being only 2′ $39\frac{10}{13}$″ shorter than the truth. As the wanton destruction of the Mexican monuments and hieroglyphic records by their cruel and barbarous conquerors has left little to study, and the extermination of the Mexicans of superior order has done away with their system, we shall not detail the names of their months and particulars of their cycles, which afford striking coincidences with those of the Tartars, Japanese, etc. We shall only add that their first cycle began in the month of January, A.D. 1090.

## INDIAN CHRONOLOGY.

Having completed, in the foregoing extract, a general and condensed account of the eras in use among other nations, we proceed to enter a little more into detail upon the peculiar chronological systems of the natives of India, drawing our information chiefly from Col. Warren's 'Kála Sankalita.'

There are a great variety of eras in use in different parts of India, but all may be classified under four general heads, according to the mode of expressing or of subdividing the year; and in this way it is proposed to notice them: namely, first, those which are founded on the sidereal divisions of the months; secondly, those which follow the intricate and peculiar luni-solar computations; thirdly, those reckoned by cycles, and in which the years are generally distinguished by names, a system which spread from India into Tibet, and was long before used in China and Japan; and fourthly, those derived essentially from the Muhammadan era, though they have since followed the ordinary reckoning of the country. The Hijra era itself is also universally employed by the Musalmáns of India, but there will be no occasion to add to the description already given of this purely lunar year.

The present section will be confined to an account of the construction of the year by each system; the modes of comparison and the application of the tables being reserved for separate explanation.

### I.—SOLAR OR SIDEREAL YEAR.

The Hindú Solar Year, as it is improperly called, is strictly sidereal; it contains that space of time during which the sun, departing from a given star, returns to the same in his apparent revolution through the zodiac. In the most ancient period of their astronomy,

before the introduction of the solar zodiac, the pandits placed the beginning of the year at the entrance of the sun into Aṣwiní, the first of the twenty-seven Nakshatras, or mansions of the fixed lunar zodiac. The solar zodiac was afterwards formed from the lunar one, about the year 1181 B.C. according to Bentley; the names of the months being taken from those of the lunar mansions in which the moon happened to be full in the year of its invention.

Bentley supposes that a lunar cycle, or luni-solar period, was about the same time discovered, there having been 3056 lunations in 247 years *and one month*, which caused the initial month of the year to change its name every 247 years; the first had been A'ṣwína, the second became Kártika, etc., so that the date of an ancient author's writing may be roughly ascertained, should he happen to mention the name of the commencing month of the year. The following is a useful table of these lunar periods, which lasted until the year 538 A.D.[1]

| PERIODS. | BEGAN. | MONTHS. | LUNAR ASTERISM COINCIDING. |
|---|---|---|---|
| 1..... | 1 Sept. 1192 B.C... | 1 Aṣwína ..... | Chaitra. |
| 2..... | 1 Oct. 945 „ ... | 1 Kártika ..... | Vaiṣákha. |
| 3..... | 29 „ 698 „ ... | 1 Agrahâyana.[2] | Jyeshṭha. |
| 4..... | 27 Nov. 451 „ ... | 1 Pausha ..... | P. Ashâḍha. |
| 5..... | 25 Dec. 204 „ ... | 1 Mágha ..... | Śrávana. |
| 6..... | 23 Jan. 44 A.D... | 1 Phálguna ... | Śatabhisha. |
| 7..... | 21 Feb. 291 „ ... | 1 Chaitra ..... | Bhádrapada. |
| 8..... | 22 Mar. 538 „ ... | 1 Vaiṣákha ... | Aṣwiní. |

The adoption of the fixed sidereal zodiac of twelve signs is ascribed by Bentley with tolerable certainty (from the position of the equinoctial colure and the minimum errors of the 'Brahma-Siddhánta' tables) to this latter epoch; whence Vaiṣákha has continued to be the initial month of the solar year to the present time. This month corresponds with the sign Mesha or Aries of the fixed solar Hindú ecliptic.[3]

The Hindús divide the year into six seasons *(ritu)*, of two sidereal months each, the succession of which is always the same; but the vicissitudes of climate in them will depend on the position of the equinoctial colure.

[1] It is necessary to allude to this lunar division to show how Vaiṣákha came eventually to be the first month of the solar year.

[2] Bentley supposes the former name of this month, Márgasírsha, to have been changed at this period, to denote its now commencing the year.

[3] According to the Hindú authorities, the year in which the zodiac was adjusted, or when the solar and sidereal zodiacs agreed, and there was no *'ain-i anshá* or precession, was in 969, A.D.

TABLE I.—*The order and names in the Sanskrit, Hindí, and Tamil languages, of the signs, months, and lunar mansions.*

| SEASONS. | SIGNS. | NAMES OF MONTHS. | | | Tamil Seasons. | Nakshatras or Lunar Mansions as they corresponded in 1192 B.C. |
|---|---|---|---|---|---|---|
| | | Sanskrit and Bengali. | Urdú. | ✓ Tamil. | | Sanskrit. |
| 1. Vasanta, | 12 ♓ Mína. | Chaitra, | Chait, | Punguni, | Si. | 14 Chaitra. |
| | 1 ♈ Mesha. | Vaiśákha, | Baisákh, | Chaitram, | V. | 15 Swáti.<br>16 Vaisákha. |
| 2. Grishma, | 2 ♉ Vrisha. | Jyeshṭha, | Jeṭh. | Vyassci, | | 17 Anurádhá.<br>18 Jyeshtha. |
| | 3 ♊ Mithuna. | Ásháḍha, | Asárh, | Auni, | G. | 19 Noriti.<br>20 Purva Ashárha. (Abhijit afterwards struck out).<br>21 Uttara Ashárha. |
| 3. Varsha, | 4 ♋ Karkaṭa. | Srávaṇa, | Sáwan, | Audi, | | 22 Srávana.<br>23 Sravishtha. |
| | 5 ♌ Sinha. | Bhádra, | Bhádon, | Auvani, | V. | 24 Satabhisha.<br>25 P. Bhádrapada. |
| 4. Śarada, | 6 ♍ Kanyá. | Áświna, | Ásan, | Paratasi, | | 26 U. Bhádrapada.<br>27 Revati. |
| | 7 ♎ Tulá. | Kártika, | Kártik, | Arpesi. | Sa. | 1 Aswini.<br>2 Bharani. |
| 5. Hemanta, | 8 ♏ Vrishika. | Márgasirsha or Agrahâyana | Aghan, | Kartiga, | | 3 Kritika.<br>4 Rohini. |
| | 9 ♐ Dhanus. | Pausha, | Pús, | Margali, | H. | 5 Mrigasiras.<br>6 Ardra.<br>7 Punarvasa. |
| 6. Śiśira, | 10 ♑ Makara. | Mágha, | Mágh, | Tye, | | 8 Pushiya.<br>9 Aslesha.<br>10 Mágha. |
| | 11 ♒ Kumbha. | Phálguna, | Phágun, | Maussi, | Si. | 11 P. Phálguni.<br>12 U. Phálguni.<br>13 Hasta. |

The Hindús employ the several following modes of considering the duration of the day:

1. The *Sávan*, or natural day, is the time between two consecutive sun-risings; therefore, this day is of variable duration. Its subdivisions are 60 *dhatas*, of 60 *vinadikas*, of 60 *vipalas*.

2. The *Saura*, or solar day, is the time during which the sun describes one degree of the ecliptic; consequently, longer or shorter as the sun is near the apogee or perigee: it is divided into 60 *dandas* (or *kalas*) of 60 *vikalas* each.

3. The *Nakshatra* day is the true sidereal day, being the time between the same point of the ecliptic rising twice. These are equal throughout the year, and are used in all computations. They are divided into *ghaṛis* and *palas* (called *vighadias* in the south), following always the same convenient sexagesimal division. The *pala* is again divided into six *práṇas* or 'respirations'; but the 'Súrya-Siddhánta' and all astronomical works continue the subdivision by 60 throughout, thus:—

60 *kshaṇas* = 1 *lava.*
60 *lavas* = 1 *nimesha.*
60 *nimeshas* = 1 *kástha.*
60 *kásthas* = 1 *atipala.*
60 *atipalas* = 1 *vipala* = 0.4 second, English.
60 *vipalas* = 1 *pala* = 24 „ „
60 *palas* = 1 *danda* = 24 minutes „
60 *dandas* = 1 *dina* or 1 'day' and night.
60 *dinas* = 1 *ritu* or 'season.'

4. The lunar day, or *tithi*, is the 30th part of a lunation, and will be spoken of hereafter: it is used in astrological reckoning.

The division into weeks is also used, and the names of the days are derived from the planets, in precisely the same order as those of Europe.

TABLE II.—*Days of the week, with their synonyms in some other languages.*

| ENGLISH. | HINDÍ. | SINGHALESE. | TIBETAN. | BURMESE. |
|---|---|---|---|---|
| ☉ Sunday ... | Ravi-vár ..... | Eri-dá ..... | Gyah nyí-ma ... | Tanang-ganvé. |
| ☽ Monday ... | Som-vár ..... | Sa-du-dá ..... | „ zla-va ... | Tanang-lá. |
| ♂ Tuesday ... | Mangal-vár ... | Ang-gahanuvá-dá... | „ míg-amar | Ang-gá. |
| ☿ Wednesday | Budh-vár ..... | Ba-dá-dá ..... | „ thag-pa.. | Buddha-hú. |
| ♃ Thursday... | Vrihaspat-vár *or* Guru-vár | Bra-has-pa-ting-dá | „ phur-bu.. | Kyása-padé. |
| ♀ Friday..... | Śukra-vár ..... | Si-ku-rá-dá ..... | „ pa-sangs.. | Sok-kyá. |
| ♄ Saturday ... | Śanichar, *or* Sani-vár... | Sena-su-rá-dá ..... | „ spén-pa... | Cha-né. |

(They have already been given in Persian, Hindústání, etc., in page 145.)

Each month contains as many days and parts of a day as the sun endures in each sign; the *civil* differing from the *astronomical* account only from its rejecting fractions of days; each civil year and month being accounted to begin at *sunrise*, instead of at the exact time of the sun's entrance into the respective signs on the strict astronomical computation. If the fraction exceeds 30 *ghaṛís* (half a Hindú day), then the civil year or month is accounted to begin one day later than the astronomical.

The portion of time assigned to each month further depends on the difference of time calculated for the passage of the sun through the northern and southern signs of the ecliptic, the time for the former being 186d. 21h. 38m. 24s., and for the latter, 178d. 8h. 34m. 6s.; the odd hours and minutes of which are applied to the beginnings of the year and months. The effect on civil reckoning is to produce differences in the relative lengths of the months of one or even two days more, or one day less, and to bring about a bissextile year of 366 days, as nearly as possible once in four years.

The unfixed lengths of the civil months renders it impossible to find the precise day corresponding to any other era, excepting by having

recourse to a calculation of the day of the week on which the Hindú civil month in question commenced, which, however, with the aid of the tables provided in Warren's excellent work from the bráhmanical formulæ, becomes a very simple problem. The order of the days having remained invariable since they first received their names, if any duration of years be multiplied by the mean length of the year, and the result in days be divided by seven, the remainder will necessarily shew the day of the week (counting from the epoch or initial day[1]), on which the period terminates.

Tables of roots, or moments at which particular epochs commence, such as centuries, will serve to facilitate this calculation, which, in fact, renders the system of the Hindú year more simple in expounding than those of the West, which are liable to secular variations.

A table of roots, as they are called, may in like manner be prepared for the durations of the months singly and collectively, so that by simple addition (rejecting sevens) the initial day of the required Hindú civil month may be accurately found. The dominical letter furnishes the same means of finding the day for any European date, and any two approximate dates may be thus brought to correspond precisely by the intervention of the weekly *feriæ*. Further explanation and examples of this process will be found in the pages of Calendric Scales, which we shall presently introduce for the purpose of simplifying the transposition of dates from one calendar to another.

It is impossible to enter into further particulars of the formation of the Hindú year without considerable knowledge of their astronomy; but it may be as well to state, that all the calculations of their books depend upon the hypothesis of four grand periods, comprising together 4,320,000,000 years, called a 'Mahá-Yug,' or great epoch of the conjunction of the planets in the beginning of the Hindú zodiac.

The four divisions of the 'Mahá-Yug' are called the 'Satya-yug,' the 'Tretá-yug,' the 'Dwápara-yug,' and the 'Kali-yug,' which latter commenced in March 3102 B.C., and is still current. All astronomical calculations start from this epoch, using the mean motions prescribed, which, by the nature of the system, are all whole numbers, although they vary in different authors, as the progress of observation suggested corrections. The three principal systems are set forth in the 'Brahma-' 'Súrya-' and 'Árya-' 'Siddhántas,' which Bentley has proved to have been framed respectively about the years 538, 1068, and 1322, A.D. The year by the 'Súrya-Siddhánta' consists of 365d. 15g. 31v. 31p. 24s., and by the 'Árya-Siddhánta,' 365d. 15g. 31v. 15p., which, expressed

[1] This, for the commencement of the Kali-yug, is Friday in the 'Súrya-Siddhánta.' In the epochs used in the 'Árya-Siddhánta,' it is Sunday.

in the European method, will be 365d. 6h. 12m. 36s. 34f.; and 365d. 6h. 12m. 30s. respectively. The latter is employed in the south of India: it differs from the Gregorian reckoning one day in sixty years, the amount of the equinoctial precession. The following table gives a general view of the planetary system according to the above authorities, and that of the 'Parásara-Siddhánta,' another authority supposed by Bentley to be nearly coeval with that of Aya Bhut.

TABLE III.—*General view of the different Hindú Planetary Systems.*

| Revolutions of | 'Brahma-Siddhánta.' | 'Súrya-Siddhánta.' | 'Árya-Siddhánta.' | 'Parásara-Siddhánta.' |
|---|---|---|---|---|
| The sun.... | 4,320,000,000 | 4,320,000,000 | 4,320,000,000 | 4,320,000,000 |
| The moon.. | 57,753,300,000 | 57,753,336,000 | 57,753,334,000 | 57,753,334,114 |
| Mercury... | 17,936,998,984 | 17,937,024,000 | 17,937,054,671 | 17,937,055,474 |
| Venus..... | 7,022,389,492 | 7,022,376,000 | 7,022,371,432 | 7,022,372,148 |
| Mars..... | 2,296,828,522 | 2,296,832,000 | 2,296,831,000 | 2,296,833,037 |
| Jupiter..... | 364,226,455 | 364,220,000 | 364,219,682 | 364,219,954 |
| Saturn..... | 146,567,298 | 146,568,000 | 146,569,000 | 146,571,813 |
| Equinoxes. | 199,669 | 600,000 | 578,159 | 581,709 |
| No. of days | 1,577,916,450,000 | 1,577,917,828,000 | 1,577,917,542,000 | 1,577,917,570,000 |
| Apsides— | | | | |
| Sun..... | 480 | 387 | 461 | 480 |
| Moon..... | 488,105,858 | 488,203,000 | 488,108,674 | 488,104,634 |
| Mercury. | 332 | 386 | 339 | 356 |
| Venus.... | 653 | 535 | 658 | 526 |
| Mars..... | 292 | 204 | 299 | 327 |
| Jupiter... | 855 | 900 | 830 | 982 |
| Saturn ... | 41 | 39 | 36 | 54 |
| Nodes, (retrograde) | | | | |
| Moon..... | 232,311,168 | 232,238,000 | 232,313,354 | 232,313,235 |
| Mercury. | 511 | 488 | 524 | 648 |
| Venus ... | 893 | 903 | 947 | 893 |
| Mars..... | 267 | 214 | 298 | 245 |
| Jupiter... | 63 | 174 | 96 | 190 |
| Saturn ... | 584 | 662 | 620 | 630 |
| Revolutions of the Rishis in an exclusive epicycle, | | | 1,599,998 | 1,599,998 |

To find the number of lunations, deduct the sun's revolutions from those of the moon, the remainder is the number sought. The mean annual motion of a planet is found by dividing its revolutions by 4,320,000,000, and their mean places at any epoch of the Kali-Yug ($k$) by the common rule of three, as, 4,320,000,000 : revolutions in a Mahá-kalpa : : $k$ : even revolutions and fraction, the latter to be converted into longitude on the Hindú ecliptic.

### ERAS DEPENDENT ON THE SOLAR YEAR.

The Hindú solar or sidereal year is used in India, south of the Nar-

bada, in Bombay, in Bengal, in Tirhút, and Nipál. The two principal eras in use are: 1. The Kali-Yug, dated, as before stated, from the equinox of March, 3102 B.C.; 2. The 'Ṣáka,' dating from the birth of Sáliváhana, a mythological prince of the Dakhan, who opposed Vikramáditya, the Rája of Ujjáyiní.

This era, called 'Ṣáka,' (a word of the same import,) commences on the 1st Baisákh, 3179, K.Y., which fell on Monday, 14th March, 78, A.D. Julian style. Several other styles seem to be connected in origin with it:

| | | |
|---|---|---|
| The Ṣáka of Bengal, as above | = 78 A.D. | = 3179 K.Y. |
| The Burmese epoch, used at Prome | = 79 A.D. | = 3180 K.Y. |
| The Aji Ṣáka, used in Java | = 74 A.D. | = 3175 K.Y. |
| The Bali year „ | = 81 A.D. | = 3182 K.Y. |

The Bengálí San, and the Vilâyatí year of Orissa, etc., will be hereafter mentioned under the fourth division.

## II.—HINDU LUNI-SOLAR YEAR.

The circumstances of the Indian luni-solar year differ from every other mode of dividing and recording time that has been employed in ancient or modern times. Some similarity had been remarked, in the secular omission of a month, to the Chaldean system; and, at a particular period, the common intercalations concurred with those of the lunar cycle of Meton, which led the learned to imagine them derived from the same source; but Warren has proved from a minute analysis of the Hindú 'Chandra-Mána,' that it has no further similitude to other systems than its dependence on the moon's motions must naturally induce.

The ordinary year, called 'Samvat-sara,' or 'mana,' is divided into twelve lunar months; an intercalary month (called in Sanskrit *adhika vulgo*, 'lound') being supplied, on a particular principle, once in about three years.

The year commences at the true instant of conjunction of the sun and moon: that is, on the new moon which immediately precedes the commencement of the solar year: falling somewhere therefore within the 30 or 31 days of the solar month Chait (*Chaitra*). The day of conjunction (*amávasyá*) is the last day of the expired month: the first of the new month being the day after conjunction.

Although the initial element of the year is thus determinate, there are two modes of reckoning the month. In the south of India they begin contemporaneously with the year, on the conjunction (*amávasyá*), and run through the 30 days in two divisions of about 15 days, called *ṣucha-* or *ṣukla- -paksha*, and *krishna-* or *bahula- -paksha*, the light- and the dark- -half, or wax and wane, of the moon.

The 'Vrihaspati-Mána,' however, which is derived from the 'Súrya-Siddhánta,' and is followed throughout Hindústán and Telingana, makes the months commence with the full moon (*púrnamá*) preceding the last conjunction; so that new-year's day always falls in the middle of the lunar month Chait, and the year begins with the last *paksha*, or light-half of that month.[1]

The lunar months are in all cases named from the solar month in which the *amávasyá*, or 'conjunction' happens, so that when two new moons fall within one solar month, (for example, on the 1st and on the 30th days,) the name of the corresponding lunar month is repeated, the year being then intercalary, or containing 13 months. The two months of the same name are distinguished by the terms *adhika* 'added,' and *nija*, 'proper' or 'ordinary.'

By the 'Súrya-Siddhánta' system, the intercalated month takes its place in the middle of the natural month; that is, of the four *pakshas*, 1, *badi*, 1, *sudi*, 2, *badi*, 2, *sudi*,—the first *badi* and second *sudi* belong to the natural month, and the first *sudi* and second *badi* to the intercalated month. The Tamil account makes the first month of the two the intercalated one.

It happens once within each term of 160 years, that there is no new moon in some one of the last six lunar months, which, from the sun being in perigee, as before explained, contain only 30 and 29 days each. On these occasions the month of that name is expunged; but it always happens that two others in the same year are for the opposite cause repeated in such years.

The common intercalary year is called *adhika-samvat-sara;* the double intercalary, with its expunged month, *kshaya-samvat-sara.*

The lunar month, whatever may be its civil duration, is divided into 30 *tithis*, or lunar days, which are subject to similar rules regarding intercalation and omission. When two *tithis* end in the same solar day, the intermediate one is struck out of the calendar, and called a *kshaya-tithi:* when no *tithi* begins or ends in a solar day, the *tithi* is repeated on two successive solar days, and the first is called *adhika.* When a *tithi* begins before or at sunrise, it belongs to the solar day about to begin: when after sunrise, it is coupled with the next solar day, provided it does not end in the same day; in which case, it would be expunged out of the column of *tithis*, as before explained.

To render this singular mode of computation more perplexing, although the *tithis* are computed according to apparent time, yet they are registered in civil time.

[1] Hence has doubtless arisen the variance in the names of the Tamil and Bengal months, the former being in name one month behind the others: (See the table of their solar year, page 150).

It is usual, however, to make account of the days in the semi-lunar periods, by the common civil reckoning, beginning (as with the years) after the completion of each diurnal period; thus, the day on which the full moon occurs is the *Sudi* 14th or 15th, and the following day is the 1st *Badi*. It is like our reckoning of the sun's place in the zodiac ($0^s.$ + $10^o.$ etc. $1^s.$ + $10^o.$ etc.), and is evidently better adapted for computations than where the current day or year is the one expressed by the figure.

The circumstance of expunging a *tithi* happens, on an average, once in 64 days; so that in one year it recurs five or six times. When a *tithi* is repeated twice it is called *tridina:* one *tithi* is equal to 0.984 of a day, or 64 *tithis*=63 days nearly.

To understand the nature of this singular disposition of time, a diagram of an entire lunar month has been inserted in the page containing the scale for the comparison of the luni-solar year, the month selected being the intercalated, or *adhika, Chaitra* of the 4924th luni-solar year of the Kali-yug, (A.D. 1822-3) a year in which Davis had ascertained that there would be a *kshayá* month, and two intercalaries. Warren's book contains the calendar for the whole year in question.

To that work we must refer for the complete solution of the problem of its construction for all cases that may present themselves, wherein perfect accuracy is requisite. The rules which we shall give hereafter will be found sufficient to bring out the result to within a day or two of the corresponding Hindú solar year, and to even closer accordance with the Christian year, in which the days are not liable to the same variations *inter se*. The elements required for working it out thus far, on the supposition of the sun and moon both maintaining a mean rate of motion in their course, are few, and may mostly be determined from the tables in the present epitome. They are:

1. The sun's mean place in the Hindú ecliptic, and the skeleton of the solar months, formed therefrom, to show the disposition of the civil and sidereal days.

2. Also the moon's mean place in the ecliptic, which is found from the *Ahargana*, or sum of days expired from the commencement of the Kali yug to the beginning of the proposed lunar year: it is necessary for obtaining the epochs of the mean conjunctions, during the year in question.

3. The *Súta-Dina*, or day of the week on which the initial conjunction falls. The two latter elements are given for every year of the last three centuries in the second General Table. For periods anterior to 1600, they may be found by adding the secular Aharganas for the broken period, to the root for the nearest epoch, contained in a separate table (VIII.) prepared for the purpose, from the data of the

'Súrya-Siddhánta.' Taking, then, the scheme of the corresponding solar year, and placing the two skeletons thus formed, in juxtaposition, the eye will at once tell what months or days will become subject to the rules of *kshaya* or *adhika*, 'expunging' or 'duplication': an example of the process will be given hereafter, in explaining a luni-solar scale contrived for working out the problem by simple inspection.

The place of the sun's and moon's apogee, the equinoctial precession, and the obliquity of the ecliptic, etc., are necessary for the true computation of the lunar days; but this degree of accuracy is beyond our present purpose.

The elements of the solar system (see page 153), would indeed furnish even these data, were it requisite; but the several equations of the sun's and moon's motions, and the gnomonic problem to convert the determinations, made for Lanká, to other situations on the globe, would call for a thorough acquaintance with the astronomic system of the Bráhmans. Where an English ephemeris is accessible, the construction of the Hindú lunar month may readily be effected for any given lunation from the times of new and full moon, corrected for the longitude of the place: it may be remembered, as a general rule, that the first day of every Hindú luni-solar month falls on the day following the new moon; and that it precedes by two days the initial *feria* (as it is called) of the Muhammadan lunar month, seldom diverging from this arrangement more than one day on either side: this is, of course, without reference to the names of the months, as those of the Hijra are continually gaining upon the others.

### ERAS DEPENDENT ON THE LUNI-SOLAR YEAR.

#### ERA OF VIKRAMÁDITYA.

The principal era to which the luni-solar system is exclusively adapted is that of Vikramáditya, called Samvat, or vulgarly Sumbut. The prince from whom it was named was of the Tuár dynasty, and is supposed to have reigned at Ujjain (Ujjáyiní) 135 years before Sálivá-hana, the rival founder of the Śáka era, south of the Narbada (Narmada) river. The Samvat era commenced when 3044 years of the Kali-yug had expired; *i.e.* 57 years B.C., so that if any year, say 4925, of the Kali-yug be proposed, and the last expired year of Vikramáditya be required, subtract 3044 therefrom, and the result, 1881, is the year sought. To convert Samvat into Christian years, subtract 57; unless they are less than 58, in which case, deduct the amount from 58, and the result will be the date B.C.

The era of Vikramáditya is in general use throughout Telingana and Hindústán, properly so called; it is less used, although known, in Bengal, Tirhút, and Nipál; and, according to Warren, is nearly unknown

in the peninsula. The luni-solar division of the year, however, is necessarily adapted to other eras, conjunctively with the solar division, because almost all the festivals and religious observances of the Hindús and Buddhists depend upon the *Chandra-mána* or lunar reckoning. There can, therefore, be hardly said to be any eras exclusively solar, although the Samvat is exclusively luni-solar.

### THE BALABHI AND SIVA-SINHA ERAS.

The Balabhi era is mentioned by Tod as occurring in an inscription found at Somnáth, and from its locality and connection with the Samvat, it must have been of the same construction, merely dating from a newly assumed epoch, which is shewn in the 'Annals of Rájasthán,' to correspond with 375 of Vikramáditya, or 318 A.D. Balabhi was destroyed in 802 Samvat, when it may be presumed the era was discontinued.

A third era, called the 'Ṣiva-Sinha Samvat,' is also noticed by the same author as having been established by the Gohils in the island of Deo: its epoch or zero corresponds with 1169 Vikramáditya Samvat (1112 A.D.)

The Faṣlí (vulgarly, Fuslee or Fusly) year, of Upper India, also follows the Samvat division, as being the system in vogue where it was introduced: this will be alluded to again under the fourth head.

## III.—YEARS NUMBERED BY CYCLES.

### ERA OF PARASURÁMA.

This division of time Warren states to be used in that part of the peninsula of India, called Malayála by the natives, extending from Mangalor, through the provinces of Malabar, Cotiote, and Travancore, to Cape Comorin. It derives its name from a prince who is supposed to have reigned 1176 years B.C., the epoch being 7th August, 3537 Julian Period, or 1925 Kali-yug. This era is reckoned in cyles of 1000 years. The year itself is solar, or rather sidereal, and commences when the sun enters the sign Kanyá (Virgo), answering to the solar month 'Asan (A'ṣwína). The commencement of the 977th year of the 3rd cycle concurs with the 1st A'ṣwína of 1723 Ṣáka, and 14th Sept. A.D. 1800.

### THE GRAHAPARIVRITTI CYCLE OF NINETY YEARS.

The southern inhabitants of the peninsula of India use a cycle of ninety years, which is little known, according to Warren, in the Karnátak. This cycle was analyzed by the Portuguese missionary Beschi, while

resident for forty years in Madurá. The native astronomers there say it is constructed of the sum of the products in days of 15 revolutions of Mars, 22 of Mercury, 11 of Jupiter, 5 of Venus, 29 of Saturn, and 1 of the Sun.

The epoch of this cycle occurs on the expiration of the 3078th year of the Kali-yug, in 24 B.C. The years follow the ordinary solar or sidereal reckoning. The concurrent cycle and year for any European year may readily be found by adding 24 and dividing by 90: thus 1830 A.D. $= \frac{1830+24}{90} = 20$ cycles, 54 years.

### THE VRIHASPATI-CHAKRA, OR 'CYCLE OF JUPITER.'

The cycle of Jupiter is supposed by many to be one of the most ancient modes of reckoning time, not only in India, but in Asia generally; but we shall shew presently, that with regard to the former country, at least, it is most probably of comparatively modern introduction. It has been, however, known from time immemorial in China, where it partakes of the same peculiarity as on the continent of India, of having separate names for each year of the cycle; but these names are curiously compounded of two series of twelve and five names in the Chinese system, as has been fully explained in page 146, whereas, in India the series of single appellations continues through the sixty years.

The origin of the Vrihaspati-Chakra is unknown: it has been imagined by some to be the same as the Chaldean Sosos, but, Warren thinks, without foundation. It is mentioned in the 'Súrya-Siddhánta,' and other works, and is constructed on astronomical principles, although its genuine application in reference to Jupiter's revolutions has long since fallen into disuse in the south of India, as well as in China and Tibet; and this circumstance will furnish a clue to ascertain the epoch of its introduction into these countries; but we must first describe the different systems followed.

There are three rules for computing the years of the Jovian cycle: 1, that of the 'Súrya-Siddhánta,' followed in this part of India; 2, that of the 'Jyotistava'; 3, that of the Telingas, followed in the south.

According to the first, Jupiter's revolutions being 364,220,000 in a 'Mahá-yug' (see the table in page 153); his motion in one solar year coincides very nearly with one sign of the zodiac ($1^s\ 00°\ 21'\ 4''$). The actual time, therefore, of the planet's passing through one zodiacal sign (which is called a year of Jupiter) is, as $30°\ 21'\ 04''$: 365d. 15g. 31p.:: $30°$: 361d. 2g. 5p., the true duration of the Chakra year. The difference, or four days and thirteen *ghaṛís* short of the solar year, will in eighty-six years amount to a whole year; so that, to keep the cycle in

accordance with the planet's heliocentric motion, one year must be expunged in that period of time.

To find the current year of the cycle on this principle for any year of the 'Kali-yug' (say the beginning of 4870 K.Y.) we have—

As 432,000 solar years to 36,422 revolutions of Jupiter, so 4870 to 410 rev. 7 signs, $2\frac{1}{2}^{o}$; the odd signs and degrees give his longitude, which requires a small correction, or *bij*. Then multiplying 410 by 12, and dividing by 60, we have 82 cycles and 7 years: the latter to be counted always from the 27th of the cycle, or *Vijaya*, gives the 33rd year, or *Vikari*.

2nd Method. The 'Jyotistava' rule expounds the last year expired of the cycle, setting out from the Śáka epoch, and reckoning from *Prabhava*, as the first of the cycle. The rule is as follows:—

Note down the Śáka year in two places. Multiply one of them by 22, and add 4291 to the product. Divide by 1875.[1] Add the integers of the quotient to the 2nd number noted down, and divide by 60. The remainder will shew the last year expired from *Prabhava*. The fraction left by the divisor, 1875, may be reduced to months and days of the current year.

Example: 4870 Kali-yug = 1691 Śáka $\frac{1691\times22+4291}{1875} = 22\ \frac{873}{1875}$ and $\frac{1091+22}{60} = 28^{c}33^{y}$; the fraction $\frac{873}{1875} = 5$ *months* $17\frac{1}{2}$ days of the 33rd current year, or *Vikari*, which agrees nearly with the former account.

The effect of the difference between the two systems is, that the expunged year in the 'Jyotistava' reckoning occurs thirteen years antecedent to that of the 'Súrya-Siddhánta.' The second General Table follows the latter account, which must be borne in mind when consulting the *chakra* column.

This form of the Vrihaspati-Chakra prevails throughout Bengal, but little more than the name is ever attended to.

3rd Method. The Telinga rule takes no notice of the commencement of the Vrihaspati year, which it identifies in duration with the Chandra-mána, or common luni-solar account: thus it directs to

Divide the expired years of the Kali-yug by 60, the quotient will give the number of cycles expired, and the remainder the odd years, to be reckoned from *Pramathi* the 13th of the Chakra.

Example: For the year 4870 Kali-yug 4870 ÷ 60 = 84 cycles, 10 years, or *Sarvadhari*, the 22nd, as expired. *Virodhi*, the 23rd, will be the current year sought.

This is the rule followed in the peninsula, and it coincides with the practice of Tibet, as appears from the following particulars, for which we are indebted to M. Csoma de Körös's researches:—

TIBETAN KALENDAR.

In Tibet the cycle of Jupiter is employed; but as the Sanskrit

[1] Multiplying by 22, and dividing by 1875, is equivalent to dividing by 85.227, the period when a year is to be expunged by this system.

literature was there introduced at a late period, this country presents the anomaly of preserving two series of denominations for the Chakra years: one derived from the Chinese by exact translation, and the other in a similar manner copied from the Indian cycle.

The whole Tibetan kalendar is, indeed, copied from the Indian; giving the solar and lunar days, the *nakshatras*, *yogas*, and *karanas*; with the usual lucky and unlucky days. The months are divided into *kar-choks* and *nák-choks*, or bright and dark halves, etc. The astronomical year begins with the vernal equinox (sidereal) on the first Baisákh, but the civil year commences differently in different parts of Tibet, varying from December to February. At Ladákh it begins in December. The Hors or Turks keep their new year some days after the winter solstice in January; and the people of U,tsáng at Lassa commence theirs with the new moon of February. The months have several names expressive of the seasons, asterisms, business undertaken in them, etc., but they are usually denominated numerically; first, second, etc. The year is luni-solar with intercalations.

The only fixed epoch in Tibet appears to be the birth or death of Ṣákya, from which event the almanacks note the years elapsed; sometimes also they note the year from the death of the two great Lamas of Lassa and Teshi-lunpo, or their re-incarnations within the last two centuries, and other memorable events.

The Tibetans, in estimating their age, especially in conversation, count by the cycle of 12 years (which is, in fact, the true cycle of Jupiter).

In the ordinary business of life, the cycle of 60 years is universally employed, in which each year has its distinct name. The cycles themselves are not distinguished numerically, but are rendered intelligible by the mention of some coincident event or remarkable person of the period, a mode highly objectionable for remote dates.

The order of the years agrees precisely with the Tamil account to the present time, having no expunged year. But the Tibetans do not count from the same fixed epoch. Their authors on the 'Kala-Chakra'[1] system state that the mode of reckoning by cycles of 60 years was introduced into India about the year 965 A.D., and that 60 years afterwards it was adopted in Tibet (about 1025-6 A.D.) Their epoch, therefore, occurs in 1025 A.D.

Now, it is remarkable that the 69th cycle of the 'Súrya-Siddhánta,' and the 15th cycle of the 'Jyotistava,' and the 68th cycle of the Telinga astronomers, were all completed in 965-6 A.D., which is not much prior to Bentley's epoch of Varaha Mihira, the supposed author of the former work.

[1] See a note by M. Csoma, on this subject, in the 'Jour. As. Soc.', vol. ii. p. 57; [and the quotation from Albirúní (Reinaud's 'Fragments'), *infrâ*, p. 167.]

Moreover, the two systems, starting from the point thus assumed, would up to the present period (on account of the omitted years in the one) diverge between 10 and 11 years from one another, which is actually the case, the year 1834 A.D. agreeing with the 39th year of the Bengal cycle, and with the 28th of the Tamil and Tibetan account.

That the cycles did not commence either with the Kali-yug or with the Śaka epoch is proved by the two rules given above for expounding their dates, which expressly state that the odd years are to be reckoned from *Vijaya* (the 27th) and *Pramathi* (the 13th) respectively, and not from *Prabhava* (the 1st) as would naturally be expected.

It is not, therefore, unreasonable to conclude that the theory of the Vrihaspati-Chakra was invented or introduced in India, as affirmed by the Tibetan authorities, in the middle of the tenth century; and this might be adduced as a confirmation of the date assigned by Bentley to the 'Súrya-Siddhánta,' which upholds and expounds that cycle.

M. Csoma states that before the introduction of the cycle of Jupiter into Tibet, frequent mention is made in their books of a period of 403 years, called *mé-kha-gya-tsho*, a symbolical name for the number 403:[1] and dates are always expressed in it, as the 80th, 240th, or any other year of this period: now it is curious, as M. Csoma remarks, that if 403 be deducted from 1025 A.D. the remainder, 622 A.D., exactly coincides with the epoch of the Hijra, leaving an impression that the latter era had been once established there. The destruction of the Buddhist religion to the north is ascribed to the Muhammadans by the Tibetan authors.

We subjoin a catalogue of the Sanskrit, Tibetan, and Chinese names of the sixty Chakra years, with an English translation of the last two. The Sanskrit names have also a meaning which is precisely rendered in Tibetan. But they have no reference to any precise objects, and are therefore not worth insertion.[2] It should be remarked that the first year of the Indian series corresponds with the fourth of the Chinese, which goes far to disprove the connection of the two cycles; for had the discrepancy been owing to the different modes of reckoning (as with the 'Súrya Siddhánta' and the Telinga), the divergence would have been at the other end of the scale; unless, indeed, it should have run through 56 years, which would have occupied nearly 50 centuries.

[1] See 'Jour. As. Soc.,' vol. iii. p. 6: *Gya-tsho*, 'a lake'=4: *Kha*, 'void'=0: and *mé*, 'fire'=3.

[2] The latter names are extracted from Warren's 'Kála Sankalita:' the Chinese from De Guignes' 'Histoire des Huns;' and the Tibetan from M. Csoma's forthcoming 'Grammar of the Tibetan Language,' now under publication.

TABLE IV.—*Names and Numbers of the Vrihaspati-Chakra, or 60 years' Cycle of Jupiter, in Sanskrit, Tibetan, and Chinese.*

| | Sanskrit Names. | Tibetan translation of Sanskrit Names. | Tibetan translation of Chinese Names. | Chinese Names. | Meaning of Chinese names. | Ch. No |
|---|---|---|---|---|---|---|
| 1 | Prabhava. | Rab-byung. | Mé-yos. | Ting-mao. | Fire-hare. | 4 |
| 2 | Vibhava. | r Nam-Hbyung. | Sa-Hbrug. | Vou-chin. | Earth-dragon. | 5 |
| 3 | Sukla. | Dkar-po. | Sa-Sbrul. | Kise. | Earth-serpent. | 6 |
| 4 | Pramodha. | Rab-myos. | Chags-r Ta. | Keng-ou. | Iron-horse. | 7 |
| 5 | Prajápati. | Skyés-bdag. | lChags-lug. | Sin-ouei. | Iron-sheep. | 8 |
| 6 | Angira. | Angira. | Ch'hu-spré. | Gin-chin. | Water-ape. | 9 |
| 7 | Srimukha. | Dpal-Qdong. | Ch'hu-bya. | Kuei-yeou. | Water-bird. | 10 |
| 8 | Bhává. | Dnos-po. | Shing-k'hyi. | Kia-su. | Wood-dog. | 11 |
| 9 | Yuvá. | Na-tshod-ldan. | Shing-Phag. | Yhai. | Wood-hog. | 12 |
| 10 | Dhátá. | Hdsin-byéd. | Mé-byi. | Ping-tse. | Fire-mouse. | 13 |
| 11 | Iswara. | Dvang-p'hyug. | Mé-gLang. | Ting-tcheou. | Fire-ox. | 14 |
| 12 | Bahudanya. | Hbru-mang-po. | Sa-Stag. | Vou-yn. | Earth-tiger. | 15 |
| 13 | Pramáthi. | Myos-ldan. | Sa-yos. | Ki-mao. | Earth-hare. | 16 |
| 14 | Vikrama. | r Nam-Qnon. | lChags-Hbrug. | Keng-chin. | Iron-dragon. | 17 |
| 15 | Brisya. | K'hyu-Mch'hog. | lChags-Sbrul. | Sin-se. | Iron-serpent. | 18 |
| 16 | Chitrabhánu | Sna-ts'hogs. | Ch'hu-rTa. | Gin-ou. | Water-horse. | 19 |
| 17 | Súbhánu. | Nyi-ma. | Ch'hu-lug. | Kuei-ouei. | Water-sheep. | 20 |
| 18 | Tárana. | Nyi-Sgrol-byéd. | Shing-spré. | Kia-chin. | Wood-ape. | 21 |
| 19 | Párthiva. | Sa-skyong. | Shing-bya. | Y-yeou. | Wood-bird. | 22 |
| 20 | Vyaya. | Mi-zad. | Mé-K'hyi. | Ping-su. | Fire-dog. | 23 |
| 21 | Sarvajit. | thams-chad-Hdul. | Mé-Phag. | Ting-hai. | Fire-hog. | 24 |
| 22 | Sarvadhárí. | Kun-Hdsin. | Sa-byi. | Vou-tse. | Earth-mouse. | 25 |
| 23 | Viródhi. | Hgal-va. | Sa-gLang. | Ki-tcheou. | Earth-ox. | 26 |
| 24 | Vikrita. | rNam-rgyal. | lChags-Stag. | Keng-yn. | Iron-tiger. | 27 |
| 25 | Khara. | Pong-bu. | lChags-yos. | Sin-mao. | Iron-ape. | 28 |
| 26 | Nandana. | Dgah-va. | Ch'hu-Hbrug. | Gin-chin. | Water-dragon. | 29 |
| 27 | Vijya. | rNam-Hgyur. | Ch'hu-Sbrul. | Kuei-se. | Water-serpent. | 30 |
| 28 | Jya. | rGyal-va. | Shing-rTa. | Kia-ou. | Wood-horse. | 31 |
| 29 | Manmatka. | Myos-byéd. | Shing-lug. | Y-ouei. | Wood-sheep. | 32 |
| 30 | Durmukha. | Qdong-nan. | Mé-Spré. | Ping-chin. | Fire-ape. | 33 |
| 31 | Hémalamva. | Qjér-Hp'hyang. | Mé-bya. | Ting-yeou. | Fire-bird. | 34 |
| 32 | Vilamva. | rNam-Hp'hyang. | Sa-Khyi. | Vou-su. | Earth-dog. | 35 |
| 33 | Vikári. | Sgyur-byéd. | Sa-P'hag. | Ki-hai. | Earth-hog. | 36 |
| 34 | Sarvari. | Kun-ldan. | l Chags-byi. | Keng-tse. | Iron-mouse. | 37 |
| 35 | Plava. | Hp'har-va. | lChags-gLang. | Sing-tcheou. | Iron-ox. | 38 |
| 36 | Subhakrit. | Dgé-byéd. | Ch'hu-Stag. | Gin-yn. | Water-tiger | 39 |
| 37 | Sobhana. | Mdsés-byéd. | Ch'hu-yos. | Kuei-mao. | Water-hare. | 40 |
| 38 | Krodhi. | K'hro-mo. | Shing-Hbrug. | Kia-chin. | Wood-dragon. | 41 |
| 39 | Viswávasu. | Sna ts'hogs-Dvyig | Shing-Sbrul. | Y-se. | Wood-serpent. | 42 |
| 40 | Parábhava. | Zil-Qnon. | Mé-rTa. | Ping-ou. | Fire-horse. | 43 |
| 41 | Plavanga. | Spréhu. | Mé'-Lug | Ting-ouei. | Fire-sheep. | 44 |
| 42 | Kílaka. | P'hur-bu. | Sa-Spré. | Vou-chin. | Earth-ape. | 45 |
| 43 | Saumya. | Zhi-va. | Sa-bya. | Ki-yeou. | Earth-bird. | 46 |
| 44 | Sádhárana. | t'hun-mong. | lChags-Khyi. | Keng-su. | Iron-dog. | 47 |
| 45 | Virodhakrit. | Hgal-byéd. | lChags-P'hag. | Sin-hai. | Iron-hog. | 48 |
| 46 | Paridhávi. | Yongs-Hdsin. | Ch'hu-byi. | Gin-tse. | Water-mouse. | 49 |
| 47 | Pramádi. | Bag-med. | Ch'hu-gLang. | Kuis-tcheou. | Water-ox. | 50 |
| 48 | Ananda. | Kun-Dgah. | Shing-Stag. | Kia-yn. | Wood-tiger. | 51 |
| 49 | Rákshasa. | Srin-bu. | Shing-yos. | Y-mao. | Wood-hare. | 52 |
| 50 | Anala. | Mé. | Mé-Hbrug. | Ping-chin. | Fire-dragon. | 53 |
| 51 | Pingala. | Dmar-Ser-chan. | Mé-Sbrul. | Ting-se. | Fire-serpent. | 54 |
| 52 | Kálayukta. | Dus-kyá-pho-nyi. | Sa-rTa. | Vou-ou. | Earth-horse. | 55 |
| 53 | Sidharti. | Don-grub. | Sa-lug. | Ki-ouei. | Earth-sheep. | 56 |
| 54 | Randra. | Drag-po. | lChags-Spré. | Keng-chin. | Iron-ape. | 57 |
| 55 | Durmati. | *b* Lo-nan. | lChags-bya. | Sin-yeou. | Iron-bird. | 58 |
| 56 | Dundubhi. | rna-ch'hén. | Ch'hu-Khyi. | Gin-su. | Water-dog. | 59 |
| 57 | Rudiródgári. | K'hrag-Skyug. | Ch'hu-P'hag. | Kuei-hai. | Water-hog. | 60 |
| 58 | Raktáksha. | Mig-Dmar. | Shing-byi. | Kia-tse. | Wood-mouse. | 1 |
| 59 | Krodhana. | Khro-vo. | Shing-gLang. | Y-tcheou. | Wood-ox. | 2 |
| 60 | Kshaya. | Zad-pa. | Mé-Stag. | Ping-in. | Fire-tiger. | 3 |

## ERA OF BUDDHA.

USED IN CEYLON, AVA, PEGU, SIAM, ETC.

The determination of the epoch of Buddha, Gotama or Sákya, has engaged the attention of many learned Orientalists, and although there remain some discrepancies in the results arrived at, most of these may be explained and reconciled by assuming that several individuals of the same character have existed at different epochs, or that the system of Buddhism has been at these times revived or re-organized.

Omitting all mention of the earliest Buddhas, such as the one who figures at the head of the lunar race of Hindú mythology, it may be advanced with tolerable confidence that the two latest of the epochs attributed to this personage are founded on actual events, from the near coincidence which may be observed in the statements of distant nations regarding them. A critical notice on the subject by Prof. Wilson, appeared in the 'Oriental Magazine' for 1825, which furnishes the following data for the epoch of, what may be called, the Elder Buddha.

| | B.C. |
|---|---|
| According to Padmakarpo, a Lama of Bhutan, who wrote in the 16th century (made known by M. Csoma de Körös) | 1058 |
| By Kalhana Pandit, author of the history of Kashmír | 1332 |
| „ Abú'l-Fazl, probably following the last | 1366 |
| „ A couplet from Chinese historians | 1036 |
| „ De Guignes' Researches | 1027 |
| „ Giorgi, (period of Buddha's death) | 959 |
| „ Bailly | 1031 |
| „ Sir William Jones | 1027 |
| „ Bentley, one occasion, 1081; on another | 1004 |
| „ Jaehrig, from a Mongol Chronology, published by Pallas | 991 |
| „ Japanese Encyclopædia, birth of Buddha | 1027 |
| „ „ his death | 960 |
| „ Matonan-lin, a Chinese historian of the 12th century | 1027 |
| „ M. Klaproth himself, concurring with Sir William Jones | 1027 |
| M. Rémusat dates the death in | 970 |
| The era adopted at Lassa, and founded on the average of nine of the dates quoted by Padmakarpo, who himself however rejects them | 835 |

The majority of these quotations concur in fixing the period of the existence of a Buddha about 1000 years anterior to the Christian era. It is not, however, believed that any chronological era is founded upon this period: and if derived from book authorities, or tradition, the same would have travelled wherever the religion spread.

There is an equally extensive and consistent series bearing testimony to the existence of a Second Buddha in the sixth century before Christ; indeed most of the eras noted are evidently identical in origin and concurrent in date to the present time.

| | B.C. |
|---|---|
| The Burmese epoch of Gotama's death, as given by Crawfurd from a native chronological table | 544[1] |
| The Singhalese epoch of Buddha's death, and commencement of their era, on the landing of Vijaya, according to Turnour ('Ceylon Almanac' for 1834) | 543 |
| The Siamese epoch, ('Oriental Magazine,' 1825) | 544 |
| (The religion of Buddha was introduced in Siam in 529 B.C., according to Finlayson.) | |
| The *nirvána* of Śákya, according to the Ráj-guru of Asam, occurred in the 18th year of Ajata Satru, and 196[2] years before Chandragupta, the contemporary of Alexander, which may agree thus, 348 + 196 = | 544 |

This date may further be reconciled with the other three dates quoted by Wilson in conjunction with them, namely,[3]

| | B.C. |
|---|---|
| The Singhalese | 619 |
| The Peguan | 638 |
| And the Chinese cited by Klaproth | 638 |

by referring these latter periods to the birth, and to the ministry or commencement of the reign of Śákya; for by the Burmese calendar the first of these events happened in the year 628 B.C., and the latter 608-9. There is a constant difference of 10 years throughout the early series of the latter chronicle, which also places the *nirvána* of Gotama in the 8th year of Ajátasat (*Ajata-satru*), instead of the 18th, as above given: by adding, then, a correction of ten years, from whatever cause it may have originated, the Burmese dates will correspond exactly with those of Pegu and Ceylon; and they are thus brought to the confirmation of the unity of origin of the eras of all the countries which received their religion from Ceylon, or through the latter from central India.[4]

## JAIN ERAS.

The Jains in some parts of India are stated to follow the era of their last Jina, Mahávíra, whom they make to be the preceptor of

[1] The 'Oriental Magazine' makes this date 546, but the authority in the text is most to be relied on. According to the invariable rule of Eastern chronologists the year is not numbered until after its completion. Thus an inscription or document is always dated 'so many years being expired after the death of Gotama:' and thus the year 1 of the Burmese sacred era corresponds with the second current year or 543 B.C. while the epoch, or *nirvána* of Śákya happened in 544.

[2] 162 years by the Burmese table in Crawfurd.

[3] [The proof of this sheet has been submitted to Prof. Wilson, who intimates to me that there are no new data of sufficiently positive bearing on this question to justify any alteration or emendation of Prinsep's original text. Burnouf seems to place the event in 543 B.C.—'Le Lotus de la bonne Loi,' p. 487.]

[4] The 'Journal Asiatique,' for November, 1833, contains a chronological table of the events of Buddha's life, derived entirely from Chinese and Japanese authorities, which makes it very evident that the Fo or Buddha of 1027 B.C. is the same identical personage as the one who died 544 B.C. As far as real chronology is concerned the recent date is alone in use; but the more ancient date seems to be supported by some passages in the Sanskrit original text.

Gotama, and place a few years anterior to him, in the year 569 B.C., and 512 before Vikramáditya. None of the Jain inscriptions found in South Bihár or elsewhere, however, shew any trace of an exclusive chronology, while they invariably bear the common Samvat date of Vikramáditya. One inscription on a brass image found on digging a tank at Baghelpur, is dated 'after Párśa 925,'[1] which Dr. B. Hamilton interprets 'after Párśwanátha, the twenty-third teacher of the Jain religion, and consequently somewhat anterior to Mahávíra, who was the twenty-fourth;' but nothing positive can be asserted of these vague epochs.

### BURMESE ERAS.

Other eras prevail in the Burmese country, which are more generally employed for the business of life, while the sacred era is kept up in ecclesiastical documents. The Prome epoch was established by king Samandri, and its first year corresponds with 623 of the sacred epoch, or 79 A.D. It seems to be the same as the Śáka era of Śáliváhana. The present Vulgar epoch used throughout Ava was established by Puppa-chan-ra-han; the first year agreeing with 639 A.D. or 1183 B. sacred era. The division of months accords with the luni-solar system of the Hindús in every respect, the year beginning as usual with the new moon of the solar month Chaitra. To reduce the Burmese vulgar year into the Christian, add 638. For the Prome era the number 78 must be used for the like purpose. They have also another sacred era, called the Grand Epoch, said to have been established by An-ja-na the grandfather of Gotama: the first year corresponds with 691 B.C.

### NEWÁR ERA OF NIPÁL.

Besides the Śáka and Samvat eras introduced by the Gorkha dynasty into Nipál, there is still in use among this people a former era, called the Newár, from the name of the ancient dominant, or aboriginal, tribe of the valley. Dr. Bramley informs us that the origin of this era is not known, though many attempt to account for it by fabulous stories. The Newár year commences in the month of October, the year 951 terminating in 1831 A.D. Its epoch concurs therefore with the month of October, 870 A.D., which number must be retrenched from a Newár date to have the corresponding Christian year.

[In concluding Prinsep's notices of Local Eras, I extract from the work of Albirúní some further details in reference to Indian cycles, to

[1] 'Trans. Roy. As. Soc.', vol. i. 527.

complete the quotations previously given in reference to the epoch of the Guptas, inserted at p. 268, vol. i.]

'Toutes ces ères présentent des nombres considérables remontent à une antiquité reculée, et leurs années dépassent les nombres cent mille et au delà. Ces nombres ont embarrassé les astronomes dans leurs calculs, et, à plus forte raison, le commun des hommes. Nous allons donner une idée exacte de ces ères, et nous rapporterons nos calculs à l'année des Indiens, dont la plus grande partie correspond à l'an 400 de l'ère de Yizderdjed. Cette époque s'exprime par un nombre rond et n'est embarrassée ni de dizaines ni d'unités. Cet avantage lui est particulier et la distingue de toutes les autres années.

'De plus, elle a été rendue à jamais célèbre par la chute du plus fort boulevard de l'Islamisme et la mort de l'illustre sulthan Mahmoud, lion du monde et le phénomène du temps: Dieu lui fasse miséricorde! En effet, Mahmoud expira moins d'un an avant cette époque.

'Le *sandhi* des Indiens précède le nourouz (premier jour de l'année) des Perses de douze jours, et il fut postérieur de dix mois Persans complets à la nouvelle de la mort du sulthan. . .

'Toutes ces ères présentent des nombres considérables et remontent à une époque reculée; voilà pourquoi on a renoncé à en faire usage. On emploie ordinairement les ères de Sri-Harscha, de Vikramaditya, de Saca, de Ballaba et des Gouptas.

'Les Indiens croient que Sri-Harscha faisait fouiller la terre et cherchait ce qui pouvait se trouver dans le sol, en fait d'anciens trésors et de richesses enfouies; il faisait enlever ces richesses et pouvait, par ce moyen, s'abstenir de fouler ses sujets. Son ère est mise en usage à Mahourah et dans la province de Canoge. J'ai entendu dire à un homme du pays que, de cette ère à celle de Vikramaditya, on comptait quatre cents ans; mais j'ai vu, dans l'almanach de Cachemire, cette ère reculée après celle de Vikramaditya de 664 ans. Il m'est donc venu des doutes que je n'ai pas trouvé moyen de résoudre.

'L'ère de Vikramaditya est employée dans les provinces méridionales et occidentales de l'Inde. On pose 342, qu'on multiplie par 3, ce qui fait 1026; on ajoute au produit ce qui s'est écoulé du schadabda, mot par lequel on désigne le samvatsara sexagésimal. Voilà ce qu'on entend par l'ère de Vikramaditya. J'ai vu le mot schadabda cité dans le livre du *Soroudou*, composé par Mahadeva Djandaryna. Le procédé qu'on emploie d'abord est incommode. Si on commençait par poser le nombre 1026 au lieu de marquer sans aucun motif 342, l'opération serait plus simple: car admettons le résultat, maintenant qu'on en est au premier samvatsara, comment fera-t-on lorsque les samvatsara, se multiplieront.[1]

'L'ère de Saca, nommée par les Indiens Sacakâla, est postérieure à celle de Vikramaditya de 135 ans. Saca est le nom d'un prince qui a régné sur les contrées situées entre l'Indus et la mer. Sa résidence était placée au centre de l'empire, dans la contrée nommée Aryavartha. Les Indiens le font naître dans une classe autre que celle des Sakya; quelques-uns prétendent qu'il était Soudra et originaire de la ville de Mansoura. Il y en a même qui disent qu'il n'était pas de la race indienne, et qu'il tirait son origine de régions occidentales. Les peuples eurent beaucoup à souffrir de son despotisme, jusqu'à ce qu'il leur vînt du secours de l'Orient. Vikramaditya marcha contre lui, mit son armée en déroute et le tua sur le territoire de Korour,

[1] Il me semble résulter de l'ensemble du passage, que le cycle sexagésimal, non-seulement était propre à une certaine partie de l'Inde, mais qu'il était d'une institution récente. Le calcul présenté par Albyronny me fait croire qu'il commença seulement l'an 959 de notre ère.—*Reinaud.*

situé entre Moultan et le château de Louny. Cette époque devint célèbre, à cause de la joie que les peuples ressentirent de la mort de Saca, et on la choisit pour ère, principalement chez les astronomes. D'un autre côté, Vikramaditya reçut le titre de *Sri*, à cause de l'honneur qu'il s'était acquis. Du reste, l'intervalle qui s'est écoulé entre l'ère de Vikramaditya et la mort de Saca, prouve que le vainqueur, n'était pas le célèbre Vikramaditya, mais un autre prince du même nom. [Here follows the passage quoted in original Arabic, and in the French and English versions, pp. 269, 271, vol. i.; and the consecutive extract is complete at p. 269, with the exception of the following sentence, which comes in after '241 de l'ère de Saca.'] L'ère des astronomes commence l'an 587 de l'ère de Saca. C'est à cette ère qu'ont été rapportées les tables Kanda Khâtaca, de Brahmagupta. Cet ouvrage porte chez nous le titre de *Arcand*.' [To this succeeds the sentence 'D'après cela,' etc.; and Albirúní, after stating his further difficulties in the reconcilement of discrepancies, and the local divergencies of the commencement of the year, concludes with the passage given *in extenso* at the foot of p. 269.]

## IV.—ERAS DERIVED FROM THE HIJRA.

### FAṢLÍ OR HARVEST YEARS.

We have alluded in the foregoing pages to one or two eras following the solar and luni-solar systems, which were nevertheless derived from the Muhammadan year. They are 1, the Bengálí san; 2, the Viláyatí (vulgò, Vilaity) or Umly year of Orissa; 3, the Faṣlí (vulgò, Fusly) year of the Upper Provinces; 4, the Faṣlí year of the Peninsula. The circumstances connected with all of these have hitherto been enveloped in some obscurity. Warren was unacquainted with the first three, except by imperfect information obtained from Calcutta. He might, however, have discovered at once their character, had he known the custom followed in this presidency of inserting the concurrent dates of all these eras at the head of every regulation enacted by Government.

The Persian almanac of the Ṣadr Díwání 'Adálat, from the year 1764, inclusive, has been translated by Mr. Reid, the Registrar of that court, for the use of civil officers in reducing the dates of native documents. These tables have proved very useful in comparing and proving the scales introduced into the present work, for facilitating the same operation.

Harington's Analysis of the Land Revenue Regulations, contains in a foot note (p. 176) the best explanation of the Faṣlí or 'harvest' years, tracing their origin to the year of Akbar's accession to the throne, or the 2nd Rabi-ul-sání, A.H. 963 (14th February, 1556): 'A solar year for financial and other civil transactions was then engrafted upon the current lunar year of the Hijra, or subsequently adjusted to the first year of Akbar's reign.' It has been by some supposed that the Bengálí san was established by Husain Sháh, one of the kings of Bengal, but the following extract from a Persian manuscript, in posses-

sion of a native gentleman at Benáres, for which we are indebted to the kind inquiries of Capt. Thoresby, Secretary of the Benáres Sanskrit College, sets the matter in a very clear light, and entirely confirms Mr. Harington's statements:—

'From the time of Amír Timúr, until the reign of Jalál-ud-dín Muhammad Akbar, there were three eras in use, viz. the Hijra, the Turkí, and the Jaláli. The Turkí era commences with the creation of the world, and is computed in cycles of twelve solar years each. In the month Muharram of A.H. 1138, five hundred and sixty-five cycles had elapsed, and the fourth year of the following cycle was in progress. Each year begins with the new moon of the month Jéth of the Hindú calendar, and the months are lunar. At the end of two or three years, as the case may be, an additional month is introduced to balance the computations by solar years and lunar months.

'The Jaláli period is dated from the 5th of the month Shábán in the year 468 Hijra, under the reign of Jalál-ud-dín Toghlak Sháh, Ibn-i Alap Arsulan Saljukí. The year begins with the Nauroz, or the day that the sun enters the zodiacal sign Aries. There are thirty days allotted to each month, and five supplemental days are added to the twelfth month, to which at the expiration of every fourth year a sixth day is superadded.

'As the annual method of computation in the Turkí era accorded with that observed by the Hindus in reckoning the years of the Samvat, it was generally used in the preparation of records and accounts, etc., but after the Emperor Akbar had extended his dominions by the conquest of Bengal, and a portion of the Dakhan, there were several modes of computing time prevalent in different parts of the empire: as the Samvat, with its lunar months and solar years; the Bengálí era, in which the year began with the arrival of the sun at the vernal equinoctial point, and the months were regulated by his passage through the twelve signs of the zodiac; and the Dakhaní era, which comprehended lunar months, and a lunar year beginning on the 12th of the light half of the month Bhádon. These differences occasioned a good deal of perplexity to the accountants and other public officers: at length some of them drew the attention of the Emperor to the subject, who, after deliberating with his ministers, desired that the three foregoing eras should be made to agree with the year of the Hijra 964, (963?) and that appropriate names should be given to them. Accordingly, it was decided that the Samvat in Upper Hindústán should be named Faṣlí, and should commence with the month Áṣwína (Kunwar), in which the collection of land-tax for the following seasons is first made. The era introduced into Bengal was denominated *San-i Bengála*, and the year was continued there, in the period of its commencement, on the sun entering Aries, as heretofore. This was likewise the case in the Dakhan, where the new era was called Vilávatí, because it was received from the Vilávat of Hindústán, and the annual revolution continued to be dated on the 12th Bhádon. These three eras therefore owe their origin to the fiat of the Emperor Akbar, and they are formed upon the basis of the Muhammadan epoch, but the annual revolutions accord with those of the eras which they superseded.'

Thus the object of Akbar was merely to equalize the name or number of the year all over his vast empire, without interfering with the modes of subdivision practised in different localities: and this explanation will materially simplify the understanding of the subject of the four harvest years.

The Bengálí san, the Viláyati san, and the Tamil Faṣlí year, may be always considered identical in character with the Ṣáka solar year, while the Faṣlí of the western provinces may in like manner be classed with the luni-solar Samvat there current.

The reason of a year's variation in the denomination of the Bengálí san will at once be seen on comparing the commencement of each.

The Hijra year 963 began on the 26th November, 1555, N.S.

The concurrent Faṣlí year, 963, began on the 1st of the *lunar* month A'san (A'ṣwína), which fell on the 10th September, 1555.

Th Viláyatí year 963, on the 1st of the *solar* month A'san, which occurred on the 8th September, 1555.

But the Bengálí san 963, began on the 1st Baisákh falling within the same Hijra year, which was necessarily that of the 11th April, 1556.

The number 592 must be added to convert the two first eras into Christian account, if less than four of their months have transpired, and 593 years, if more; also 593 for the first nine months of the Bengálí san, and 594 for the rest.

### FASLÍ ERA OF THE DAKHAN.

The Faṣlí year of the Peninsula, however, differs two years from the preceding, being apparently in advance of them. This can only be caused by its having branched off from the Hijra as a parent stock at a later period.

The year 1240 of this Faṣlí begins in July, 1831, or in the second month of 1247 Hijra. The difference is seven years, which converted into days, and divided by 11, the constant acceleration of the lunar year per annum, gives a period of about 230 years back for the epoch sought. But as the Faṣlí only drops behind, one year in 33, a latitude to that extent may be allowed in fixing the epoch of its foundation. In fact, we learn from Grant Duff's 'History of the Marhattas,' that this Dakhaní era owes its origin to the Emperor Sháh Jahán, who, after bringing his wars in Maháráshtra to a close in 1636, endeavoured to settle the country, and introduce the revenue system of Tudor Mul, the celebrated minister of the Emperor Akbar. Along with the survey and assessment naturally came the 'revenue year,' which, commencing as usual with the current Hijra year of the time, has now diverged from it seven years, as above-mentioned.

The constant for converting this era into Christian years is + 590. The year is, or ought to be, sidereal, but the Madras Government has now fixed its commencement to the 12th July. Its subdivisions are however, little attended to, the sole purpose of its application being in revenue matters.

### THE TÁRÍKH ILÁHÍ, OR ERA OF AKBAR.

This era was established by the Emperor Akbar, in the thirtieth year of his reign, (A.H. 992, A.D. 1584,) many years after his introduction of the Faṣlí era, as Abú'l-Fazl says, 'in order to remove the perplexity that a variety of dates unavoidably occasions. He disliked the word Hijra, 'flight,' but was at first apprehensive of offending ignorant men, who superstitiously imagined that this era and the Muhammadan faith were inseparable. Amír Fatteh Ul-láh Shírází corrected the calendar from the tables of Ulugh Beg, making this era to begin with his majesty's reign. The days and months are both natural solar, without any intercalations. The names of the months and days correspond with the ancient Persian (see page 143). The months have from 29 to 30 days each. There are no weeks, the whole 30 days being distinguished by different names; and in those months which have 32 days, the two last are named *roz o shab* (day and night), and to distinguish one from the other are called first and second.'

The epoch of the Iláhí era consequently falls on Friday the 5th Rabi-ul-sání, A.H. 963, corresponding with the 19th February, 1556, N.S. which number must be added to bring its dates into Christian account. It is used on inscriptions, coins, and records of Jahángír's and the following reigns, but generally coupled with the Hijra date.

### THE SHAHÚR (VULGÒ, SHUHOOR) OR SOOR ERA OF MAHÁRÁSHTRA.

There is another era of Muhammadan origin still employed by the Maráthas of the west, entitled the Shahúr or Soor-san, a corruption of the Arabic word *shahúr*, (plural of *shahr*, 'month,') and literally meaning the 'year of months.' An account is given of this era in Capt. Jervis's 'Report on the weights and measures of the southern Konkan.' That officer affirms on some Hindú authority that it was introduced on Thursday, the 6th June, 1342, A.D., in the Hijra year 743, while others place it a year sooner: but the computation of its agreement with the Hijra year, says Capt. Jervis (in the same manner as was followed in ascertaining the epoch of the Faṣlí year), shews it to have begun when the 745th Hijra (A.D. 1344) corresponded with the 745th Shahúr san.[1] It was probably adopted on the establishment of one of the Muhammadan kingdoms in the Dakhan under the reign of Tughlak Sháh.

[1] This correspondence would continue for several years before and after, so that the Hindú account may probably be correct.

The years of this era are denominated after the corresponding Arabic numerals.

The following examples will be sufficient to explain the system; the names are, however, corrupted in pronunciation by the Maráthas:

| | | |
|---|---|---|
| 1 *Ahadí,* | 10 *Ashar,* | 100 *Máyat* or *Máya.* |
| 2 *Isní,* | 20 *Ishrín,* | 122 *Isna-ashrín máyat.* |
| 3 *Salas,* | 30 *Saldtín,* | 200 *Miatín.* |
| 4 *Arba,* | 40 *Arbain,* | 300 *Suls máyat.* |
| 5 *Khams,* | 50 *Khamsin,* | 450 *Khamsín-arba máyat.* |
| 6 *Sita,* | 60 *Sitain,* | 1000 *Alf.* |
| 7 *Saba,* | 70 *Saba-in,* | 1100 *Máyat-o-alf.* |
| 8 *Samáni,* | 80 *Samánin,* | 1230 *Sulasín máyatín-o-alf.* |
| 9 *Tisa,* | 90 *Tisa-in,* | 1313 *Suls-ashar suls-máyat-o-alf* (A.D. 1834). |

The correspondence with other eras may be seen from the following brief rule for their mutual reduction:

To reduce Shahúr years into { Christian, Śáka, Samvat, Faṣlí } years, add { 599, 521, 655, 9 } years respectively.

If the given date fall after the sixth month of the Shahúr year, it will occur in the next ensuing Christian year; and after nine months, in the next Śáka or Samvat year; because the Shahúr year begins in June, at the sun's entrance into the lunar mansion Mriga (Mrigasírsha.) It is not stated whether its subdivisions follow the Hindú or Arabic system, but the former may be taken for granted.

### JALÚS YEARS.

There is still another system of recording time to which some allusion is requisite under this head, as it depends, like the foregoing, upon the Hijra reckoning. During the dynasty of the Mughal Emperors, the year of the reigning monarch was usually inscribed, as is the case in most countries, upon all documents of a public nature. It was also particularly noted on the gold and silver coinage, where indeed it continues to be inserted under the Company's rule, although the date has long remained unchanged. The Hijra date was frequently added.

The jalús-san (*san-i jalús*) necessarily follows the Hijra reckoning, and the same tables will answer for the solution of them when the accession day of each sovereign is known. Those of the Mughal Emperors have accordingly been inserted among the festivals of the Muhammadan lunar calendric scale, where an explanation will be given of their application. A list of the sovereigns of Dihlí, in chronological succession, will also be found among the tables of dynasties.

It seems that the 'jalús-san' has been constituted a fixed era in

the Southern Konkan, commencing with the year of Sáliváhana 1578, (A.D. 1656), and running on henceforward in the ordinary solar manner contrary to all precedent in other parts of India.[1] This epoch, derived from Capt. Jervis' 'Report,' is anterior by two years to the coronation of Aurangzeb; but it corresponds precisely with the accession of Sultán 'Ali 'Adl Sháh II. to the throne of Bíjápur; from which circumstance it doubtless drew its origin, although from subsequent disturbances, its correction was lost sight of.

In general it should be borne in mind that the duration of a Muhammadan monarch's reign, as well as of his life, is reckoned by lunar years; and that both consequently require correction when compared with other dates.

## RÁJ-ABHISHEK ERA OF THE MARÁTHAS.

Only a few years subsequent to the establishment of the Jalús era last mentioned, another of the same nature was set up by the Maráthas, or at least it has since come into use, founded upon the rise of their power under the famous Sivají. We have the authority of Grant Duff for fixing the date of Sivají's ascending the throne, on the death of his father Sháhjí, in the year A.D. 1664, when he first assumed the title of Rájá, and struck money in his own name.

To convert the Ráj-abishek (meaning 'ointment of the king') into the Christian era, 1664 must be added. The division of months probably accords with the Śáka system.

## RECAPITULATION.

The whole of the eras mentioned in the foregoing imperfect account are, for the convenience of reference, collected below in a tabular form, with the equation for their conversion into the ordinary reckoning of Europe. It has been deemed preferable to insert the year of the Christian era, corresponding with the *first nominal year* of each of the Indian eras, which will here and there produce an apparent variation from the epochs or initial dates given in the foregoing sketch. (See note, p. 165.)

[1] Jervis's 'Report,' p. 99.

TABULAR VIEW OF ERAS USED IN INDIA, WITH THE EQUATION FOR CONVERTING THEM INTO CHRISTIAN DATES.

| DENOMINATION. | COMMENCEMENT. | EQUATION. |
|---|---|---|
| The Kali-yuga (vulgò, Kul-júg) commences | Friday, 18th Feb. 3102 B.C. | (before Christ) 3102—K=C |
| The first year being reckoned as 0, the year 1 accords with | 3101 B.C. | (after Christ) K—3101=C |
| Era of Buddha's birth, by Chinese account.. | 1027 B.C. | not used. |
| Ditto, his *nirvána*, in India, Ceylon, Ava, Siam, etc. 1st year= | 543 B.C. | 545—B=C<br>B—543 =C |
| Jain era of Mahávíra | 1st year 629 B.C. | not used. |
| Samvat (Sumbut) of Vikramáditya, year 1 = | ) March, 26 B.C. | — 56¾ |
| Śáka (Shuk) of Sálivâhana=equinox | 79 A.D. | + 78¼ |
| Parasuráma cycle of 1000 years (1st year of 4th cycle=Sept. | 825 A.D. | + 824¾ |
| Grahaparivrithi ditto, of 90 years (1st year of 21st cycle)= | 1777 A.D. | +1776 |
| Vrihaspati (Jupiter's) cycle of 60 years (established in 966 A.D.) | | |
| „ 1st year of 84th cycle ('Súrya-Siddhánta')= | 1796 A.D. | +1795 |
| „ „ 83rd cycle (Telinga account) ....= | 1807 A.D. | +1806 |
| „ „ 14th cycle (Tibet account) .....= | 1807 A.D. | +1806 |
| „ „ 76th cycle (Chinese account) ....= | 1804 A.D. | +1803 |
| Turkish or Igharí cycle of 12 years coincides with Tibetan and Telinga Jovian cycle, in its initial year | | disused |
| Balabhi Samvat of Somnáth.....1st year= March | 318 A.D. | + 317¼ |
| Siva-Sinha Samvat of Gujurát..... „ = „ | 1113 A.D. | +1112 |
| Burmerse era of Prome..... „ = „ | 79 A.D. | + 78¼ |
| „ Vulgar epoch..... „ = „ | 639 A.D. | + 638 |
| „ Sacred era (see Buddha).... „ = „ | 543 B.C. | — 544 |
| „ Grand epoch..... „ = „ | 691 B.C. | — 692 |
| Java era, Aji Śáka..... „ = „ | 74 A.D. | + 73 |
| „ Bali era..... „ = „ | 81 A.D. | + 80 |
| Nipál, Newár era..... „ = „ | 870 A.D. | + 869 |
| Tibet, *me-kha-gya-tsho*, 403-year era, „ = „ | 622 A.D. | + 621 |
| Hijra, lunar year..... begins July 16, | 622 A.D. | see tables |
| Era of Yezdijird, Persian..... „ June 16, | 632 A.D. | + 631½ |
| Jaláli era of Malik-sháh..... „ March, | 1079 A.D. | +1078¼ |
| Táríkh-i iláhí of the Emperor Akbar... „ March, | 1556 A.D. | |
| Faṣlí, revenue year of Upper India (established in | 1556 A.D.) | + 592¾ |
| „ „ of South India „ | 1638 A.D.) | + 590 |
| Vilâyatí „ of Orissa... „ | 1556 A.D.) | + 592¾ |
| Bengálí-san „ of Bengal..... „ | 1556 A.D.) | + 593¼ |
| Shahúr-san of the Maráthas.....(introduced in | 1344 A.D.) | + 599 |
| Jalús-san of Bíjapúr.....('Ali Shâh II. | 1656 A.D.) | +1656 |
| Ráj-abhishek of the Maráthas .....(Śivaji's reign | 1664 A.D.) | +1664 |

## DIRECTIONS FOR USING THE CHRONOLOGICAL TABLES.

Most persons consulting the following tables will wish to be spared the perusal of the description of the origin and formation of the several eras comprised in them, and will be desirous only of obtaining their object as directly as possible, namely, the conversion of a date expressed in either the Christian, Hijra, Samvat, Śáka, Kali-yug, Vrihaspati, Parasuráma, or Grahaparivrithi system, into the corresponding day of any other of the same series. The present rules will be confined to this object. They are partly repeated, also, with examples, on the pages of the several yearly scales, for the convenience of more immediate reference.

### RULES FOR ANY DAY OF TIME FALLING WITHIN THE RANGE OF THE GENERAL TABLES XIII. AND XIV., NAMELY, FROM A.D. 622 TO A.D. 1900 FOR THE HIJRA, AND FROM A.D. 1600 TO A.D. 1900, FOR THE HINDÚ ERAS.

#### HIJRA KALENDAR.

1. To find the Christian date corresponding with any Muhammadan date of the Hijra era,—say the 17th of Rajab 1201 A.H.

Take the initial day of the year 1201 from Table XIII., which will be found to be 3 (or Tuesday) the 24th October, 1786 N.S. Then set the first day of Muharram on the edge-scale of Table V. to the 24th October on the proper column of the Christian era, Table XII. Opposite to the 17th Rajab will be found to stand the 5th May (1787), which is the day required.

2. To find the Muhammadan day agreeing with a given Christian day,—say the 17th March, 1804 (a leap-year).

Find from Table XIII. what year of the Hijra commences next before March, 1804, namely, 1218 A.H., beginning on Saturday, the 23rd April, 1803. Set Scale V. to this date, and read off opposite to the 17th March, the 4th of Zilhejeh; but because 1804 is a leap-year, and the day falls after the end of February, one day must be added to the scale, and the reading will then be the 5th Zilhejeh, which is the day sought. Should the day of the week be also required, set the 1st Muharram to Saturday on the hebdomadal scale in Table XII. and read off 5th Zilhejeh, Saturday.

3. To find the Christian year corresponding with the jálús of any of the Mughal Emperors of Dihlí,—for instance, the 19th year of the reign of Sháh-'Álam?

In the column of Festivals in the Hijra kalendar, page 182, it will be seen that Sháh 'Álam came to the throne on the 1st of Jumádi I, A.H. 1173. Adding to this 19, as above, the general Hijra Table shows that A.D. 1192 commenced on the 30th Jan. 1778:—the 19th jalús

therefore (by the scale) will be seen to commence on the 29th May of the same year.

4. To convert a Hijra date into any of the Hindú eras corresponding to the given Hindú date.

In these cases the intervention of the Christian scale is required, because the initial days of the Muhammadan years are given only in the latter system. When once the English day is found, the rules already prescribed will answer for determining the remainder of the problem.

HINDÚ SOLAR OR SIDEREAL KALENDAR.

5. To convert a date in the Kali-yug, Śáka, or Bengálí-san eras, into the corresponding Christian date,—for example, the 1st of Jéth B.S. 1199 = K.Y. 4893 = SA'K. 1714.

By Table XIV. the 1st Baisákh, K.Y. 4893, of the Hindú solar era coincided with Tuesday, the 10th April A.D. 1792. Therefore setting the index of the Hindú solar scale, Table X., to that day, on the proper column of Table XII.:—the 11th of May will be the resulting date.

(From the astronomical formation of the Hindú months, an error of a day in the *civil* reckoning will sometimes occur, which the kalendar X. is unable to correct, without a computation of the elements of the beginning of the particular Hindú month by the rule hereafter laid down, page 178).

6. The converse of the above proposition hardly requires a separate explanation.

Example: Required the Hindú solar day corresponding to the 20th December, 1813?

The 20th December, 1813, must fall in the Kali-yug year, 4914 (B.S. 1220), commencing, by Table XIV., on Sunday, 11th April, 1813. Setting, therefore, the index of the Hindú solar year to the 11th April, the 20th December will be found to accord with the 7th or 8th Pausha, 4914 K.Y. (The Viláyatí or Dakhaní reckoning gives the latter, while the Bengálí gives the former day.[1])

FESTIVALS.

The Hindú Solar Kalendar contains but three festivals of any importance, namely, *Charak-púja,* on the last day of the year (or entrance of the Sun into the first sign *mesh,* of the Sidereal Zodiac), called also the *Satwa-sankránta*:—the first day of the Viláyatí year of

[1] It should be remarked that Warren's 'Kála Sankalita' gives the beginning of the Hindú solar year invariably one day earlier than the reckoning followed in the tables of the Ṣadr Díwání. This arises from his using the Tamil year of the 'Arya Siddhánta,' while the 'Surya Siddhánta' is used in Bengal. We have not ventured to alter the tables, but the correction may be borne in mind.

Orissa and of the peninsula in general, viz., the autumnal equinox, or rather the Sun's entrance into Virgo:—and the *Makar-sankránta*, on the last day of Paushya, when the sun enters Capricornus. The Christian day on which these occur will be shewn by the scale when the index is adjusted for the given year.

LUNI-SOLAR KALENDAR.

7. To reduce a given date in the Samvat of Vikramáditya, or in the Faslí of the Upper Provinces, to the corresponding approximate Christian day,—for instance, the 2nd Súdí Bhádon(súdí Bhádra) 1861, Samvat, or the 16th Bhádon, 1211, Faslí.

By the general Table XIV., column 15, the Samvat year 1861, commenced on the *day after* the last conjunction, which fell on Sunday, 11th March, 1804.

Setting, therefore, the index of the luni-solar scale of Table VII. (or the new moon of the month Chaitra), to the 11th March, we find the 16th Bhádon (Bhádra) falls on the 7th August. But the year 1861, Samvat, is an *adhika*, 'lound,' or intercalary year; it is necessary, therefore, to find out what month is repeated, otherwise the denomination Bhádon may be a month erroneous. (N.B. It is always one of the first five months or the last month of the lunar year that is repeated).

8. To ascertain what month will be repeated in the Hindú luni-solar year,—taking for example the year 1861.

Set the index of Table VII. (the new moon of Chaitra) to the date of the beginning of the luni-solar year in the solar kalendar, taken from column 16 of the General Table XIV. namely, in the present instance, the 1st of the solar month Chaitra, which month (by column 14, of Table XIV, will contain 31 days.)

It will immediately be seen, that a second new moon will fall on the 31st of the same solar month Chaitra; the lunar month Chaitra therefore will be repeated, and the lunar month Bhádon (Bhádra) will fall a month later, coinciding with the ordinary month A'san[1] (Aṣwina.)

Therefore, in reading off the date opposite to the 16th Bhádon—(A'san,) the English date will come out the 6th September, A.D. 1804, which is now correct.

9. The converse of this proposition is equally simple, regard being paid to the *character* of the luni-solar year, and the month to be repeated (if any) being first ascertained by the rule just explained.

[1] The data for this example are taken from Warren; but strictly speaking the intercalation in this case should have belonged to the preceding year, since the definition of the commencement of the new year states that it begins with the *last* new moon antecedent to the first Baisákh of the solar kalendar.

Example: Find the approximate luni-solar day for the first July, 1812.

By the General Table XIV. the Samvat year 1869 begins on the day following the 13th March, 1812; it is an Adhika or intercalary year, beginning on the 3rd of the solar month Chaitra, which contains 31 days.

Setting the luni-solar index accordingly to the 2nd of Chaitra on the solar kalendar, the scale informs us at a glance that two new moons will fall within the solar month Baisákha; the lunar month of that name will consequently be repeated, and the denominations of the following months will be altered accordingly.

Now, set the luni-solar index to the 13th March, and read off opposite to the 1st July, the 6th (Sáwan) Asárha, 1869, which is the approximate date: (in reality it fell on the 7th, for no fixed scale can represent the variations of the lunar month correctly to a day in all cases.)

RULES FOR INTERCALATION.

It is not however necessary, within the limits of the General Table, to resort to the juxtaposition of the luni-solar and solar scales, to ascertain what month will be intercalated, since the initial letter of the month required is given in the 14th column of Tab. XIV.: thus AV signifies Adhika Vaisákha, or that the month Vaisákha will be repeated: the whole of the abbreviations which can occur, and the general order in which they do occur, are as follow:

| | | | | |
|---|---|---|---|---|
| AA | *Adhika* | *Asárha* | These intercalations happen respectively when the luni-solar year begins on the | 5th or 6th of Chaitra (sol. calendar.) |
| AV | „ | *Vaisákha* | | 2nd or 3rd ditto |
| AB | „ | *Bhádra* | | 9th or 10th ditto |
| AS | „ | *Srávana* | | 6th, 7th, or 8th ditto |
| AJ | „ | *Jyestha* | | 4th, 5th, or 6th ditto |
| AC | „ | *Chaitra* | | 0 or 1st ditto[1] |
| AS | „ | *Srávana* | | 6th, 7th, or 8th ditto. |

In this table, the last column shews what commencing day of the Samvat year will cause particular months to be intercalated: when therefore, by the rule just given, this day has been expounded, the existence and position of an intercalation is also determined for the given year: thus, in the Samvat year 500, as the initial day falls on the 4th of Chaitra, there will be an intercalation of the month Jyestha.

Some ambiguity, however, will still remain as to the actual month to be repeated, since, if Vaisákha had 32 days in that year and Chaitra 31, new moons would have occurred on the 3rd and 32nd of Vaisákha, and consequently the latter month would have been the one repeated.

[1] If Chaitra be accounted the *first* month of the year: but if it be called the *last* month, then the intercalation of Chaitra occurs when the preceding luni-solar year begins on the 10th or 11th Chaitra solar kalendar. Both cases are met with in the tables, as though the matter were indifferent to the Hindú astronomers.

To overcome this unavoidable degree of uncertainty, the problem must be worked out systematically with the elements furnished by the tables of Solar and Lunar Ahargana, but such an extreme measure will seldom or never be required in ordinary cases.

### LUNAR FESTIVALS.

The days on which the principal lunar festivals of the Hindús occur being inserted in the kalendar in Table VII, will be solved in European dates by simple inspection when the scale is once adjusted. It is only necessary to bear in mind that in an intercalary year such feasts as occur in the double month will be confined to the *nij* or proper month; and as the Adhika or intercalary month falls always in the middle of the 60 days (see page 155), the festivals will either happen in the first or in the last fifteen days of this period. All the festivals subsequent to it will be shifted forward one lunation along with the names of the months.

### TO CONVERT SAMVAT INTO ṢÁKA DATES.

For instance what is the Ṣáka day for the 6th Asara, 1869, Samvat?

Set the initial day of the luni-solar scale to the date of the solar Chaitra, given in the General Table as before (the 3rd Chaitra, or rather the 2nd, because the same General Table says, that Chaitra has 31 days): then (because also it is an intercalary year) read off opposite to the 6th (Sáwan) Asárha on the lunar scale,—the 19th Asárha, solar reckoning, which will be correct by the Dukhaní account. The Bengálí account is in all cases one day earlier. The Ṣáka year corresponding to Samvat 1869 by the General Table is 1726.

The same process precisely must be followed to find the Samvat from the Ṣáka date; only reversing the readings.

### CYCLES.

For the years of the several cycles of Parasuráma, Grahaparivritthi, and Vrihaspati, simple inspection of the table will be sufficient to find corresponding dates, as the sub-divisions of these years are seldom required. The names of the cycle of Jupiter (Vrihaspati) for the numerals in column xi. will be found in Table IV., page 163.

NOTE.—It should be borne in mind, that the natives, in speaking or writing a date in simple years, always express the number of years *expired*, not the current year, as is the custom in Europe. When they mention the month, therefore, they mean the month of the following current year: but as the numerical denomination of the Hindú year remains unchanged throughout it, no thought need be taken of the distinction of *expired* years, unless where a calculation has to be made from an initial epoch. In common parlance they may be treated like

the current years of any other system, as being more consonant with our ideas, and less liable to cause mistakes in transferring dates to and fro.

## RULES FOR DATES TO WHICH THE TABLES DO NOT EXTEND.

There are two methods of solving Hindú dates anterior to the tables: 1st, by finding the time expired since the Kali-yug epoch (which commenced on Friday, the 18th February, of the year 3102 B.C.); or, 2nd, by starting from some more modern epoch, the correspondence of which has been previously established. The latter is the most convenient method, and a Table of such epochs (IX.), taken from the 'Káli Sankalita,' has been consequently inserted for the purpose of applying it in page 188: thus—

Let it be required to find the Christian date, Julian style, for the 15th Pausha, 622 Śáka? (623 current.)

From Table IX. it appears that the Śáka year 622 began on Saturday the 20th March, 700 A.D. Set the Index of the Hindú solar year scale to that day, and read off the 15th Pausha = 6th December, 700.

But as the Hindú months may vary in length a day or two, this result (if requisite) may be verified by finding the day of the week of both kalendars: thus—

| | D. | G. | P. |
|---|---|---|---|
| 1. Extract from Table IX. the root of the epoch ..... | (6) | 05 | 50 |
| Add from Table X. the collective duration to the 1st Pausha... | (1) | 18 | 37 |
| And 15 days to the 15th of the month..... | (15) | 00 | 00 |
| The sum, rejecting sevens, is.....(Monday) | (1) | 24 | 27 |

2. By the Dominican letter Table XI, of p. 190, the year 700 A.D. will be found to have commenced on Friday; whence (by the scale of days in the second part of the same table) the 6th of December will fall on Monday, which day, agreeing with that just found, the first computation is proved to be correct to a day.

Answer: Monday, the 6th December, 700 A.D.

Example 2. What is the Hindú solar date corresponding to the 12th June, 538 A.D.

The epoch for the expired year 3601, K.Y., or Śáka 422 (the nearest in occurrence to the year 538 A.D.) is ... ..... (6) 21 40 on the 18th March.

| | | | |
|---|---|---|---|
| Add from Table VIII. 30 years... | (2) | 45 | 46 |
| „ „ 8 years... | (3) | 04 | 12 |
| The year Kali-yug 3639 began ... | (5) | 10 | 58, or on Friday nearest the 18th March, 538. |

Solve the Dominical day, by which Friday proves to be the 19th March.

Set the index of the Hindú solar scale according to the 11th March in the Christian kalendar, and read off, the 12th June = 23rd Asárha.

Now, by the Dominical letter, the 12th June falls on a Saturday;

| | | | |
|---|---|---|---|
| And for the Hindú year we have as above..... | (5) | 10 | 58 |
| Add collective duration to the first of Asárha ..... | (6) | 19 | 44 |
| And the 23 days of Asárha..... | (23) | | |
| Making the 23rd Asárha fall also on..... | (6) | 30 | 42 = Saturday; which |

proves the operation to be correct, and the result to be, Saturday, the 23rd Asárha year 460 Ṣáka.

Example 3. Expounded from the Kali-yug epoch. On what Christian day fell the 18th Mágha, 4903 K.Y. ?

The proximate Christian year is 4903—3101 = A.D., 1802 current. Take the contracted Ahargana from Table VIII,. viz. —

| | | | |
|---|---|---|---|
| 4000 years | = | (2) | 01 33 |
| 900 „ | = | (5) | 52 51 |
| 3 „ | = | (3) | 46 34 |
| | | (4) | 40 58 |
| Deduct constant, or *Sodhyam*[1] ..... | | (2) | 08 51 |

Year 4904 K.Y. begins (astronomically), (2) 32 07, counting from Friday, or on Sunday: and as the fraction is more than 30 gharis,[2] the civil year will commence on the following day, or on Monday: this is called the *suta dina*, and must fall, according to the General Table, somewhere near the 12th April. By the Dominical Table, then, it will be found that Monday corresponded with the 12th April of that year.

The remainder of the operation may be performed as before, either by the scale, or by the collective roots of the months: by both the answer comes out Sunday, 30th January, 1803.

## SAMVAT AND FAṢLÍ DATES ANTERIOR TO THE TABLES.

Where the tables do not give the initial day of the luni-solar year, it may be found from the table of Lunar Ahargana in p. 186, by the following simple process:—

1. Find the number of years elapsed since the commencement of the Kali-yug.
2. Extract the number of days corresponding with the elapsed period of Hindú solar years above found, from Table VIII.
3. Extract also the number of days elapsed in the luni-solar period corresponding, from Table VI.

Subtract the latter from the former, and the result is the number of days by which the luni-solar anticipates the solar year: if the remainder, however, exceed one lunation, or 29d. 31g. 50p., that amount must be deducted from it; because it is thence evident that an intercalary month would have intervened; the rule for the luni-solar year being, that it shall commence from the last new moon preceding the solar year.

NOTE.—For a correspondence of the luni-solar with the European date, it will in all cases be necessary to expound the beginning of the Hindú solar year in the first instance.

Example: On what European day did the Samvat year 1660 commence?

1660 Samvat = { 1660 − 57 = 1603 A.D. (page 172). / 1660 + 3044 = 4704 Kali-yug (expired.)

[1] Because the moment of the conjunction of the planets at the Hindú epoch occurred so many days and hours after the *zero* of the weekly reckoning. See note in page 188.

[2] The civil year begins at sunrise: the astronomical at noon.

1st. The number of solar days elapsed to the end of the Kali-yug year 4704 will be

| | D. | G. | P. | |
|---|---|---|---|---|
| 4000 | 1461035 | 01 | 33 | |
| 700 | 255681 | 07 | 46 | |
| 4 | 1461 | 02 | 06 | |
| | 1718177 | 11 | 25 | |
| Deduct *Sodhyam* or constant | 2 | 08 | 51 | |
| Days elapsed, or root of K.Y. 4704 | 1718175 | 02 | 34 | (Tuesday). |

2nd. The number of luni-solar days elapsed, by Table VI. will be

| | | | |
|---|---|---|---|
| 4000 | 1461025 | 50 | 19 |
| 700 | 255675 | 49 | 49 |
| 4 | 1446 | 59 | 56 |
| Days elapsed, or root of Samvat 1660 | 1718148 | 40 | 04 |

Deducting this from the above, the remainder 26 is the number of days by which the luni-solar year precedes the solar, the last conjunction of the sun and moon falling on the (30 — 26 =) 4th of Chaitra: one day must, however, in all cases be added to this result, as the luni-solar year begins on the *day after* the conjunction of the sun and moon.

The 1st Baisákh, solar year 4704 K.Y, occurs on Monday, the 7th of April, 1603 A.D., therefore deducting 25 days as above stated, the year 1660 Samvat began on Wednesday, the 12th March, 1603 A.D.

Setting the luni-solar scale accordingly to that day, any intermediate day of the year may be found: having previously determined whether any and what month of the year will undergo repetition or expungement, by the rules laid down in page 178.

Example 2. What day of the Samvat era corresponds with the 1st January A.D. 1 o.s.?

The year A.D. 1 = Kali-yug 3102 = Samvat 58; but as these years begin in March-April, the 1st January will fall in the preceding years respectively, viz. K.Y. 3101, and Sam. 57.

For the initial day of the solar year we have, epoch of 3101, by Table IX. = 14th March A.D. 0.[1]

| | | | |
|---|---|---|---|
| The solar days expired, omitting fractions, will be | 3000 = | 1,095,776 | |
| | 100 = | 36,526 | |
| | 1 = | 365 | |
| | | | 1,132,667 |
| The luni-solar days will be (Tab. VI.) | 3000 = | 1,095,732 | |
| | 100 = | 36,500 | |
| | 1 = | 354 | |
| Two intercalary months | = | 59 | 1,132,645 |
| The Samvat precedes the solar year by | | | 22 days |

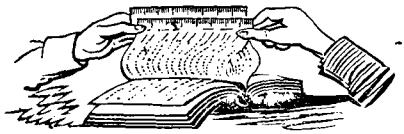
and consequently begins on the 20th February, A.D. 0., and by the formula in page 177, it will be a 'lound' year, repeating either the month Bhádra or Srávana.

Setting, therefore, the index of the luni-solar kalendric scale to the 20th Feb. in the appropriate Christian scale, the first of January will be found to fall on the 5th of Mágha (Phálguna) or 'Samvat 57, *Mágha-badi panchami.*'

[1] Some chronologists make the year 0 = 1 B.C., and indeed this is the common mode of reckoning.

It is impossible, within the compass of the present practical rules, to furnish methods for correcting the approximate lunar days solved as above: for such a degree of accuracy, recourse must be had to Warren's, Jervis', or Bentley's tables; but as the lunar equations seldom exceed half a day in time, the moon's mean place will always be within one day of the truth.

METHOD OF ADJUSTING THE CALENDRIC SCALES.



Lay the book open on a table: take the two required pages in the hands and depress them with opposite curvature. They will then bear side motion so as to adjust the respective indices.

N.B.—The duration of a day is represented by the space between two lines on the scale, not by the lines themselves.

---

The Muhammadan Year is of the most simple construction, consisting of twelve months of thirty and twenty-nine days alternately, with an intercalary day added to the last month on the 2nd, 5th, 7th, 10th, 13th, 16th, 18th, 21st, 24th, 26th, and 29th years of a cycle of 30 lunar years. For further particulars, see page 144.

APPLICATION OF THE SCALE.

*To find the European day corresponding to any Hijra date, or vice versa?*

From the General Table find the day on which the Hijra year commences, to which set the index of the present scale (or the 1st day of Muharram), in that one of the columns of the European calendar, which may be most convenient for the purpose.

EXAMPLE.

*Required the English day corresponding to the 12th Shábán,* A.H. 1228?

By the General Table of the Hijra, the year 1228 commenced on Monday, 4th January, 1813; setting therefore the 1st Muharram to that day in the outermost column but one in page 191, there will be found opposite to the 12th Shábán, the 10th of August, which is the day required.

To find the name of the day, set the index to Monday in the column of weeks and days; the 12th Shábán will be found to fall on Tuesday.

---

The jalús years of the Mughal Emperors must be converted into Hijra years, by adding the initial years in each case, found in the column of 'festivals,' and then expounded as in the example just given.

| FESTIVALS, ETC. | MONTHS. |
|---|---|
| New year's day, 1. Fête of Hasan and Hosain called the 'Muharram,' kept by Shías, whole month | MUHARRAM. |
| | SAFAR. |
| Jahándár Sháh, j. 14th, 1124. | RABÍ I. |
| Akbar, jalús 3rd, 963. | RABÍ II. |
| Sháh A'lam, jalús 1st, 1173. Ahmad Sháh, j. 2nd, 1161. Humáyun, jalús 9th, 937. | JUMÁDI I. |
| Aurangzíb, jalús 1st, 1068. Sháh Jahán, jalús 8th, 1037. | JUMÁDI II. |
| Jahángír, jalús 24th, 1014. | RAJAB. |
| Shab-i-barát, full moon. | SHÁBÁN. |
| Ramzán begins, ☽ or 1st. Babar, jalús 5th, 899. Akbar II., jalús 6th, 1221. A'lamgír II., j. 10th, 1167. Taimúr, jalús 12th, 771. | RAMZÁN. |
| Eed-ul-fitr. ☽ or 1st. | SHAWÁL. |
| Bakr-eed, 9th. | ZILKADA. |
| Muhammad Sháh, j. 25th, 1131 Bahádur Sháh, j. 1st. 1118. | ZILHEJA. |
| Farrukhsír, jalús 23d, 1124. Ordinary year 354 days. Leap year, 355 days. | 29-30 |

TABLE VI.—*Ahargana Chandramana, or Luni-solar Periods, reckoned from the beginning of the Kali-yug, according to the Surya Siddhánta, to find the root, or commencement of any Luni-solar Year.*

The days in this account are reckoned from Thursday.

| Years. | Luni-solar Periods. D. | G. | P. | Years. | Luni-solar Periods. D. | G. | P. | Years. | Luni-solar Periods. D. | G. | P. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | (4) 354 | 22 | 01 | 20 | (0) 7294 | 03 | 19 | 300 | (1) 109558 | 28 | 53 |
| 2 | (1) 708 | 44 | 03 | 30 | (0) 10955 | 50 | 53 | 400 | (4) 146087 | 49 | 07 |
| 3 | (0) 1092 | 37 | 54 | 40 | (0) 14588 | 06 | 37 | 500 | (1) 182617 | 09 | 21 |
| 4 | (4) 1446 | 59 | 56 | 50 | (0) 18249 | 54 | 11 | 600 | (4) 219146 | 29 | 35 |
| 5 | (2) 1801 | 21 | 57 | 60 | (1) 21911 | 41 | 46 | 700 | (0) 255675 | 49 | 49 |
| 6 | (1) 2185 | 15 | 48 | 70 | (0) 25543 | 37 | 31 | 800 | (4) 292205 | 10 | 04 |
| 7 | (5) 2539 | 37 | 50 | 80 | (1) 29205 | 45 | 06 | 900 | (5) 328704 | 58 | 27 |
| 8 | (2) 2893 | 59 | 51 | 90 | (2) 32867 | 32 | 40 | 1000 | (2) 365234 | 18 | 42 |
| 9 | (1) 3277 | 53 | 43 | 100 | (1) 36499 | 48 | 24 | 2000 | (6) 730498 | 09 | 13 |
| 10 | (6) 3632 | 15 | 44 | 200 | (5) 73029 | 08 | 38 | 4000 | (6) 1461025 | 50 | 19 |

*To find on what day of the Solar month, Chaitra, the beginning of any luni-solar year falls.*

1. From table VIII. of *Solar Ahargana* page 188, extract the number of solar days elapsed for the period of the Kali-yug.

2. From the present table extract in a similar way the number of days elapsed in the same luni-solar period.

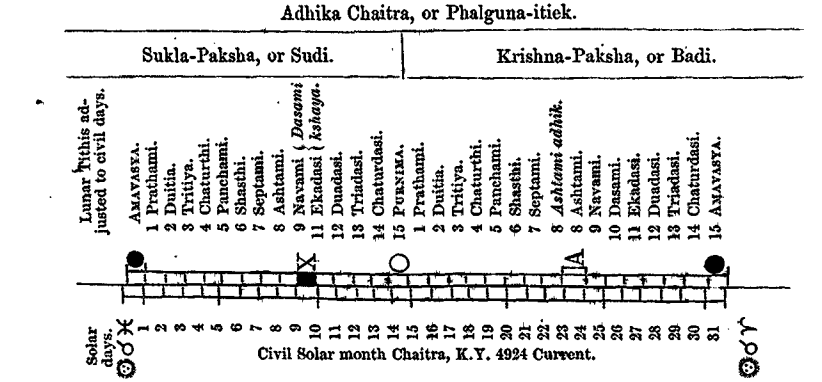
3. Subtract the latter from the former, and if the remainder exceed 29½ days, then subtract that amount so that the remainder shall always be less than 29½.

4. This remainder is then the number of days by which the lunar year precedes the solar, and, counted back from the 30th of the solar month, Chaitra, shews the date in that month with which it commences.

For an example, see p. 181.

SPECIMEN OF A LUNAR MONTH FROM THE HINDÚ CALENDAR FOR THE INTERCALARY MONTH CHAITRA OF THE 4924TH LUNI-SOLAR YEAR OF THE KALI-YUG.

Adhika Chaitra, or Phalguna-itiek.




This scale shows how the lunar civil day is coupled with the solar civil day in which it ends: that when two tithis end in one day, the second tithi is expunged: and when none end in a civil day, the tithi is reckoned twice; see p. 155.

# VII.—HINDU LUNI-SOLAR YEAR.

## EXPLANATION.

The divisions on the outer edge express mean semi-lunations, or the mean time of the moon's conjunction and opposition, shewing their connection with civil time in the adjoining column of days, wherein it will be seen that the first day of the month occurs on the day *following* the conjunction. The figures of this column follow the ordinary reckoning of the waxing and waning moon, *sudi* and *badi*.

A. means *amavasya*, or conjunction.

P. *purnima*, or full moon.

▬▬ *badi* or *krishna-paksha*, dark half of the month.

═══ *sudi* or *sukla-paksha*, bright ditto.

The inner column of figures gives the days of the lunar months as used in the Fasli year, beginning always with the full moon.

The names of the months follow the same rule, beginning with the full moon; so that the Samvat year begins in the middle of Chaitra.

The names in capitals give the months as they occur in an ordinary year.

When a month is intercalated, it takes the name of the preceding month; and all the subsequent months, and festivals corresponding, are shifted forward one lunation. In such cases the second column of names must be used from the intercalated month onwards.

## RULE.

*To find what month is to be repeated in an intercalary year?*

Set the index, or *navarátra* to the date in the solar month Chaitra of the next page on which it falls by the General Table, column xvi. Then cast the eye down the scale, and observe whether and in what solar month two new moons occur: that month will become *adhika* or repeated.

If in any solar month (Pausha or Mágh) no new moon occurs, that month will be *kshaya* or expunged from the luni-solar year.

To find the Christian day of any Samvat or Fasli date, set the index to the expounding initial date in March or April, and read off as usual.

| COLLECTIVE INTERVALS OF MEAN LUNATIONS | | | FESTIVALS. (Those kept as holidays are marked *). |
|---|---|---|---|
| D. | G. | P. | |
| | | | *Navarátra*, year begins. |
| | | | *Manwantara*, 3. |
| | | | *Rámnavami*, sudi, 9. |
| | | | *Manwantara*, *f.m.* |
| 29 | 31 | 50 | *Akshaya tritiya*, sudi, 3. |
| | | | *Narsinha*, sudi, 14. |
| 59 | 03 | 40 | *Arnya shasti*, sudi, 6. |
| | | | *Dasera*, sudi, 10. |
| | | | *Nirjila*, fast do. 11th. |
| | | | *Snán yátra*, full m. |
| 88 | 35 | 30 | *Rath yátra*, sudi, 2. |
| | | | *Ulta do.*, sudi 10. |
| | | | *Guru-púja: Karnghanta: f.m.* |
| | | | *Manwantara*, badi, 8. |
| 118 | 07 | 20 | *Nág-panchami*, sudi, 5. |
| | | | *Pabitra*, 11. |
| | | | *Rákhi purnimá*, *f.m.* |
| | | | *Bhadri-krishna*, 3. |
| | | | *Janamasthami*, badi, 8. |
| 147 | 39 | 11 | *Nandatsova*, badi, 9. |
| | | | *Yugádya*, badi, 13. |
| | | | *Manwantara*, sudi 3. |
| | | | *Anantachaturdasi*, s.14. |
| | | | Fasli year begins. |
| | | | *Mahálaya*, 15 days of b. |
| 177 | 11 | 01 | *Durga-púja*, sudi, 15 d. |
| | | | *Rámlila*, 10 days. |
| | | | *Bijai dasami*, s. 10. |
| | | | *Bharat milán*, s. 11. |
| 206 | 42 | 51 | *Diwáli (Kali-puja.)* |
| | | | *Bhaidúj*, sudi, 2. |
| | | | *Jagaddhátri*, 9. |
| | | | *Kártik-purnimá.* |
| | | | *Bhairava*, badi, 8. |
| 236 | 14 | 41 | |
| | | | *Pisáchmochun*, sudi, 14. |
| | | | *Manwantara*, badi, 8. |
| 265 | 46 | 31 | |
| | | | *Ganésh chaturthí*, b. 4. |
| 295 | 18 | 21 | *Jugádya*, 15. |
| | | | *Sripanchami*, sudi, 5. |
| | | | *Ratanti*, sudi 14. |
| | | | *Pryág-asnán*, full m. |
| 324 | 50 | 11 | *Sivarátri*, badi, 14. |
| | | | *Huli commences*, s. 8. |
| | | | *Huli, or Dolyatra*, 15. |
| 354 | 22 | 01 | *Varuni*, badi, 13. |
| | | | Ordinary year ends (354 days.) |
| 383 | 53 | 51 | Intercalary year ends. (384 days). |

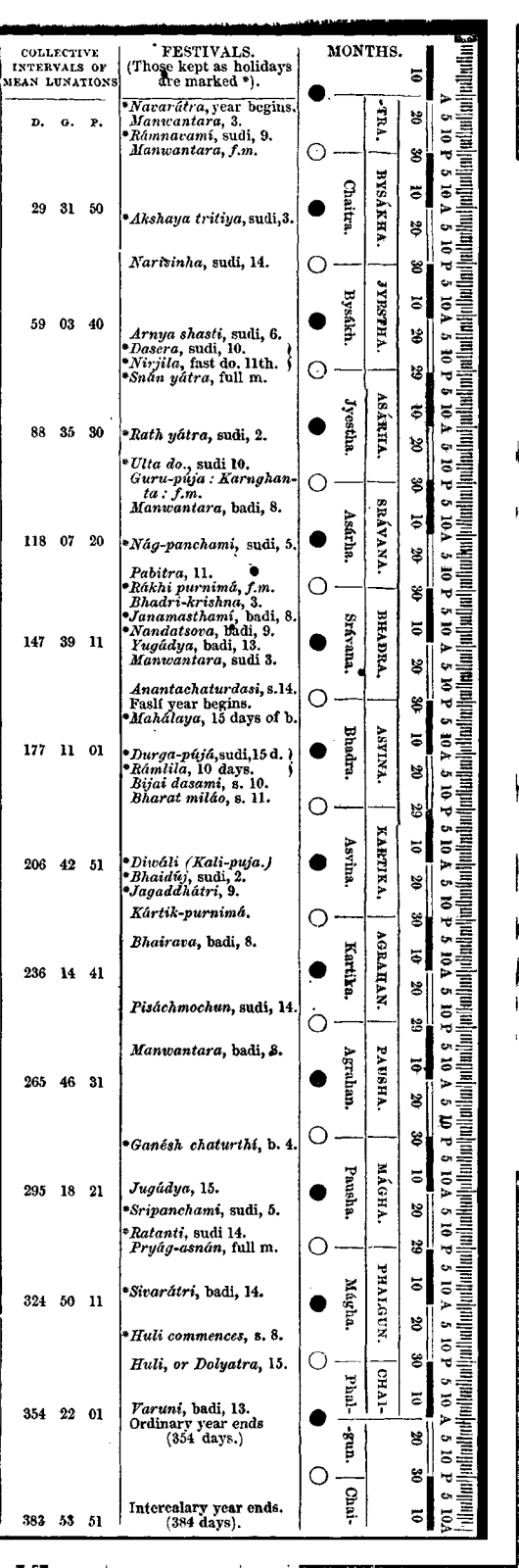


TABLE VIII.—*Solar Ahargana, or days, gharis, and pals elapsed from the beginning of the Kali-yug, for any period of years, with the days of the week (within brackets) obtained, by dividing the collective days by 7.*

| Years. | Time corresponding. D. | G. | P. | Years. | Time corresponding. D. | G. | P. | Years. | Time corresponding. D. | G. | P. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | (1) 365 | 15 | 31 | 20 | (4) 7305 | 10 | 30 | 300 | (6) 109577 | 37 | 37 |
| 2 | (2) 730 | 31 | 03 | 30 | (2) 10957 | 45 | 46 | 400 | (6) 146103 | 30 | 09 |
| 3 | (3) 1095 | 46 | 34 | 40 | (1) 14610 | 21 | 01 | 500 | (6) 182629 | 22 | 42 |
| 4 | (5) 1461 | 02 | 06 | 50 | (6) 18262 | 56 | 16 | 600 | (6) 219155 | 15 | 14 |
| 5 | (6) 1826 | 17 | 38 | 60 | (5) 21915 | 31 | 31 | 700 | (6) 255681 | 07 | 46 |
| 6 | (0) 2191 | 33 | 09 | 70 | (4) 25568 | 06 | 47 | 800 | (6) 292207 | 00 | 19 |
| 7 | (1) 2556 | 48 | 41 | 80 | (3) 29220 | 42 | 02 | 900 | (5) 328732 | 52 | 51 |
| 8 | (3) 2922 | 04 | 12 | 90 | (1) 32873 | 17 | 17 | 1000 | (5) 365258 | 45 | 23 |
| 9 | (4) 3287 | 19 | 44 | 100 | (6) 36525 | 52 | 32 | 2000 | (4) 730517 | 30 | 47 |
| 10 | (5) 3652 | 35 | 15 | 200 | (6) 73051 | 45 | 04 | 4000 | (2) 1461035 | 01 | 33 |

From any period found by this table, the constant quantity 2 days 8 gh., 51 pl. is to be subtracted, because the epoch of the Kali-yug occurred that time after the zero of the table. The days of the week are to be counted from Friday.

The solar *ahargana* are required at length to find the beginning of the luni-solar year, as explained in page 186, and in the text at page 181.

To find the beginning of the Solar year, however, it is sufficient to take out the figures between brackets (with the *gharis* and *pals*, where accuracy is required) for the odd years of the century; and add them to the epoch of the nearest century in the following table as explained in page 180.

TABLE IX.—*Epochs of Hindú Solar Years occurring in centuries before or after Christ, J. S.*

To be used for finding the beginning of any year, without reference to the commencement of the Kali-yug.

| European year before Christ. | Anno Kali-yug. | Epochs. D. | G. | P. | Date in March. | European year after Christ. | Anno Kali-yug. | Saka year. | Epochs. D. | G. | P. | Date in March. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1000 | 2101 | (1) 20 | 25 | | 5 | 300 | 3401 | 222 | (6) 37 | 30 | | 16 |
| 900 | 2201 | (1) 12 | 30 | | 6 | 400 | 3501 | 322 | (6) 29 | 35 | | 17 |
| 800 | 2301 | (1) 04 | 35 | | 7 | 500 | 3601 | 422 | (6) 21 | 40 | | 18 |
| 700 | 2401 | (0) 56 | 40 | | 7 | 600 | 3701 | 522 | (6) 13 | 45 | | 19 |
| 600 | 2501 | (0) 48 | 45 | | 8 | 700 | 3801 | 622 | (6) 05 | 50 | | 20 |
| 500 | 2601 | (0) 40 | 50 | | 9 | 800 | 3901 | 722 | (5) 57 | 55 | | 20 |
| 400 | 2701 | (0) 32 | 55 | | 10 | 900 | 4001 | 822 | (5) 50 | 00 | | 21 |
| 300 | 2801 | (0) 25 | 00 | | 11 | 1000 | 4101 | 922 | (5) 42 | 05 | | 22 |
| 200 | 2901 | (0) 17 | 05 | | 12 | 1100 | 4201 | 1022 | (5) 34 | 10 | | 23 |
| 100 | 3001 | (0) 09 | 10 | | 13 | 1200 | 4301 | 1122 | (5) 26 | 15 | | 24 |
| A.D. 0 | 3101 | (0) 01 | 15 | | 14 | 1300 | 4401 | 1222 | (5) 18 | 20 | | 25 |
| 100 | 3201 | (6) 53 | 20 | | 14 | 1400 | 4501 | 1322 | (5) 10 | 25 | | 26 |
| 200 | 3301 | (6) 45 | 25 | | 15 | 1500 | 4601 | 1422 | (5) 02 | 30 | | 27 |

From 1600 A.D. the General Table furnishes a continuation of the above epochs.

*Note.*—When this table is used, the days of the week are to be counted from Sunday.

Example.—On what day does the year 4250 K. Y. commence?

| | | | |
|---|---|---|---|
| Nearest epoch 4201 gives ..... | (5) | 34 | 10 |
| Add for 40 years, (table viii.) ..... | (1) | 21 | 01 |
| 9 ditto ..... | (4) | 19 | 44 |
| Counting from Sunday, it begins on the | (4) | 14 | 55, fourth, or |

Thursday falling nearest to the 23rd of March, A.D. 1149.

## X.—HINDU SOLAR OR SIDEREAL YEAR.

### EXPLANATION.

The divisions on the outermost edge of the paper shew the correct astronomical lengths of the Hindu-solar months, agreeing with the quantities in the column headed Collective Duration.

The scale of days, gives the civil division of the months when the astronomical year commences at or near sunrise: it is liable to variation when otherwise; but the first and second three-monthly periods always contain 94 and 93 days respectively.

The names of the months in Bengáli and Tamil, and their astronomical duration, are given in the column of months.

### RULE.

*To find the European date of any day in the Kali-yug, Sáka, Bengálí san, or Viláyaty or Tamil eras: or vice versâ.*

Set the index, or 1st Bysákh, to the initial day of the Christian year extracted from the General Table, or found by means of the Table of Epochs in the opposite page; and read off the date required.

To resolve the Hindú solar date concurrring with any day of the luni-solar year, Samvat or Faslí, set the index of the luni-solar scale (p. 187) to its expounded day in Chaitra and read off the day required, which will however be only an approximation, as the lengths of the lunar months vary in a trifling degree.

| FESTIVALS. | (The Luni-solar year commences on the last new moon occurring in this month.) COLLECTIVE DURATION. Day of week. | D. | G. | P. | MONTHS. Tam. Ben. | Chaitra. |
|---|---|---|---|---|---|---|
| Year begins, on ☉'s entering the sidereal sign ♈ (*mésha*) called *Satwa-sankrant.* | (2) | 30 | 55 | 32 | BYSÁKHA. ♈ CHAITRAM. d. g. p. 30 55 32 | 10 20 |
| | (6) | 62 | 19 | 44 | JYESHTA. ♉ VYASEI. d. g. p. 31 24 12 | 31 10 20 |
| | (2) | 93 | 56 | 22 | ASÁRHA. ♊ AUNI. d. g. p. 31 36 38 | 31 10 20 |
| *Kark-sankrant.* (*Shankodhara méla* at Benares.) | (6) | 125 | 24 | 34 | SRÁVANA. ♋ AUDI. d. g. p. 31 28 12 | 32 10 20 |
| | (2) | 156 | 26 | 44 | BHÁDRA. ♌ AUVANI. d. g. p. 31 02 10 | 31 10 20 |
| Viláyati year begins, 1. | (4) | 186 | 54 | 06 | ASVINA. ♍ PARATOSI. d. g. p. 30 27 22 | 31 10 20 |
| *Tula-sankrant.* | (6) | 216 | 48 | 13 | KÁRTIKA. ♎ ARPASI. d. g. p. 29 54 07 | 31 10 20 |
| | (1) | 246 | 18 | 37 | AGRAHANA. ♏ KARTIGA. d. g. p. 29 20 24 | 30 10 20 |
| | (2) | 275 | 39 | 30 | PAUSHA. ♐ MARGALI. d. g. p. 29 20 53 | 29 10 20 |
| *Makar-sankrant.* | (4) | 305 | 06 | 46 | MÁGHA. ♑ TYE. d. g. p. 29 27 16 | 30 10 20 |
| | (5) | 334 | 55 | 10 | PHÁLGUNA. ♒ MAUSSI. d. g. p. 29 48 24 | 29 10 20 |
| | (1) | 365 | 15 | 31 | CHAITRA. ♓ POONGOON. d. g. p. 30 20 21 | 30 10 20 |
| *Charak-púja.* | | | | | | 30 |

TABLE XI.—*To find the day of the week for any date from* 5000 B.C. *to* 2700 A.D. *First Part—for New Year's Day of any Year.*

| Centuries before Christ. | | | | | | | Odd years of Centuries. | | | | Centuries after Christ. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4800 | 4700 | 4600 | 4500 | 4400 | 5000 4300 | 4900 4200 | | | | | 1700 | | 1800 | | 1500 1900 | 1600 2000 | |
| 4100 | 4000 | 3900 | 3800 | 3700 | 3600 | 3500 | | | | | 2100 | | 2200 | | 2300 | 2400 | |
| 3400 | 3300 | 3200 | 3100 | 3000 | 2900 | 2800 | | | | | | | | | | | |
| 2700 | 2600 | 2500 | 2400 | 2300 | 2200 | 2100 | | | | | | | | | | | |
| 2000 | 1900 | 1800 | 1700 | 1600 | 1500 | 1400 | | | | | 0 | 100 | 200 | 300 | 400 | 500 | 600 |
| 1300 | 1200 | 1100 | 1000 | 900 | 800 | 700 | | | | | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
| 600 | 500 | 400 | 300 | 200 | 100 | 0 | | | | | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 |
| | | | | | | | | | | | 2100 | 2200 | 2300 | 2400 | 2500 | 2600 | 2700 |
| Fr. | Th. | W. | Tu. | M. | Su. | Sa. | 0 | 28. | 56. | 84. | Fr. | Th. | W. | Tu. | M. | Su. | Sa. |
| Th. | W. | Tu. | M. | Su. | Sa. | Fr. | .1 | .29 | .57 | .85 | Sa. | Fr. | Th. | W. | Tu. | M. | Su. |
| Tu. | M. | Su. | Sa. | Fr. | Th. | W. | 2 | 30 | 58 | 86 | Su. | Sa. | Fr. | Th. | W. | Tu. | M. |
| M. | Su. | Sa. | Fr. | Th. | W. | Tu. | 3 | 31 | 59 | 87 | M. | Su. | Sa. | Fr. | Th. | W. | Tu. |
| Su. | Sa. | Fr. | Th. | W. | Tu. | M. | 4. | 32. | 60. | 88. | W. | Tu. | M. | Su. | Sa. | Fr. | Th. |
| Sa. | Fr. | Th. | W. | Tu. | M. | Su. | .5 | .33 | .61 | .89 | Th. | W. | Tu. | M. | Su. | Sa. | Fr. |
| Th. | W. | Tu. | M. | Su. | Sa. | Fr. | 6 | 34 | 62 | 90 | Fr. | Th. | W. | Tu. | M. | Su. | Sa. |
| W. | Tu. | M. | Su. | Sa. | Fr. | Th. | 7 | 35 | 63 | 91 | Sa. | Fr. | Th. | W. | Tu. | M. | Su. |
| Tu. | M. | Su. | Sa. | Fr. | Th. | W. | 8. | .36. | 64. | 92. | M. | Su. | Sa. | Fr. | Th. | W. | Tu. |
| M. | Su. | Sa. | Fr. | Th. | W. | Tu. | .9 | .37 | .65 | 93 | Tu. | M. | Su. | Sa. | Fr. | Th. | W. |
| Sa. | Fr. | Th. | W. | Tu. | M. | Su. | 10 | 38 | 66 | 94 | W. | Tu. | M. | Su. | Sa. | Fr. | Th. |
| Fr. | Th. | W. | Tu. | M. | Su. | Sa. | 11 | 39 | 67 | 95 | Th. | W. | Tu. | M. | Su. | Sa. | Fr. |
| Th. | W. | Tu. | M. | Su. | Sa. | Fr. | 12. | 40. | 68. | 96. | Sa. | Fr. | Th. | W. | Tu. | M. | Su. |
| W. | Tu. | M. | Su. | Sa. | Fr. | Th. | .13 | .41 | .69 | .97 | Su. | Sa. | Fr. | Th. | W. | Tu. | M. |
| M. | Su. | Sa. | Fr. | Th. | W. | Tu. | 14 | 42 | 70 | 98 | M. | Su. | Sa. | Fr. | Th. | W. | Tu. |
| Su. | Sa. | Fr. | Th. | W. | Tu. | M. | 15 | 43 | 71 | 99 | Tu. | M. | Su. | Sa. | Fr. | Th. | W. |
| Sa. | Fr. | Th. | W. | Tu. | M. | Su. | 16. | 44. | 72. | | Th. | W. | Tu. | M. | Su. | Sa. | Fr. |
| Fr. | Th. | W. | Tu. | M. | Su. | Sa. | .17 | .45 | .73 | | Fr. | Th. | W. | Tu. | M. | Su. | Sa. |
| W. | Tu. | M. | Su. | Sa. | Fr. | Th. | 18 | 46 | 74 | | Sa. | Fr. | Th. | W. | Tu. | M. | Su. |
| Tu. | M. | Su. | Sa. | Fr. | Th. | W. | 19 | 47 | 75 | | Su. | Sa. | Fr. | Th. | W. | Tu. | M. |
| M. | Su. | Sa. | Fr. | Th. | W. | Tu. | 20. | 48. | 76. | | Tu. | M. | Su. | Sa. | Fr. | Th. | W. |
| Su. | Sa. | Fr. | Th. | W. | Tu. | M. | .21 | .49 | .77 | | W. | Tu. | M. | Su. | Sa. | Fr. | Th. |
| Fr. | Th. | W. | Tu. | M. | Su. | Sa. | 22 | 50 | 78 | | Th. | W. | Tu. | M. | Su. | Sa. | Fr. |
| Th. | W. | Tu. | M. | Su. | Sa. | Fr. | 23 | 51 | 79 | | Fr. | Th. | W. | Tu. | M. | Su. | Sa. |
| W. | Tu. | M. | Su. | Sa. | Fr. | Th. | 24. | 52. | 80. | | Su. | Sa. | Fr. | Th. | W. | Tu. | M. |
| Tu. | M. | Su. | Sa. | Fr. | Th. | W. | .25 | .53 | .81 | | M. | Su. | Sa. | Fr. | Th. | W. | Tu. |
| Su. | Sa. | Fr. | Th. | W. | Tu. | M. | 26 | 54 | 82 | | Tu. | M. | Su. | Sa. | Fr. | Th. | W. |
| Sa. | Fr. | Th. | W. | Tu. | M. | Tu. | 27 | 55 | 83 | | W. | Tu. | M. | Su. | Sa. | Fr. | Th. |

*Second Part—for Months or Days.*

| Days Additive. | January. October. | | | | | February. March. November. | | | | | January, L. Y. April. July. | | | | | May. | | | | | June. | | | | | Feb., L. Y. August. | | | | | September. December. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | | 2 | 9 | 16 | 23 | 30 | 7 | 14 | 21 | 28 | | 4 | 11 | 18 | 25 | | 6 | 13 | 20 | 27 | | 3 | 10 | 17 | 24 | 31 |
| 1 | 2 | 9 | 16 | 23 | 30 | 6 | 13 | 20 | 27 | | 3 | 10 | 17 | 24 | 31 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | | 7 | 14 | 21 | 28 | | 4 | 11 | 18 | 25 | |
| 2 | 3 | 10 | 17 | 24 | 31 | 7 | 14 | 21 | 28 | | 4 | 11 | 18 | 25 | | 2 | 9 | 16 | 23 | 30 | 6 | 13 | 20 | 27 | 1 | 8 | 15 | 22 | 29 | | 5 | 12 | 19 | 26 | |
| 3 | 4 | 11 | 18 | 25 | | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | | 3 | 10 | 17 | 24 | 31 | 7 | 14 | 21 | 28 | 2 | 9 | 16 | 23 | 30 | | 6 | 13 | 20 | 27 | |
| 4 | 5 | 12 | 19 | 26 | | 2 | 9 | 16 | 23 | 30 | 6 | 13 | 20 | 27 | | 4 | 11 | 18 | 25 | | 1 | 8 | 15 | 22 | 29 | 3 | 10 | 17 | 24 | 31 | | 7 | 14 | 21 | 28 | |
| 5 | 6 | 13 | 20 | 27 | | 3 | 10 | 17 | 24 | 31 | 7 | 14 | 21 | 28 | | 5 | 12 | 19 | 26 | | 2 | 9 | 16 | 23 | 30 | 4 | 11 | 18 | 25 | | 1 | 8 | 15 | 22 | 29 |
| 6 | 7 | 14 | 21 | 28 | | 4 | 11 | 18 | 25 | | 1 | 8 | 15 | 22 | 29 | 6 | 13 | 20 | 27 | | 3 | 10 | 17 | 24 | | 5 | 12 | 19 | 26 | | 2 | 9 | 16 | 23 | 30 |

EXPLANATION.

Any year being given, either before or after Christ, Old or New Style, find the century at the top of the Table and the odd years in the middle column. The square of intersection shows the day on which the year commences. Then look for the day of the month in the lower part of the same table, and on a line with it, in the first column, is shown the number of days to be added to the initial day of the year first found: thus the 15th of April, 1833, will fall on Sunday + 6 = Saturday.

If the given year be a leap year, and the month January or February, it must be looked for under January, L. Y. or February, L. Y. A leap year after Christ is marked by a dot on the right hand; one before Christ, by a dot on the left.

# XII.—CHRISTIAN ORDINARY SOLAR YEAR.

| | JANUARY. | FEBRUARY. | MARCH. | APRIL. | MAY. | JUNE. | JULY. | AUGUST. | SEPTEMBER. | OCTOBER | NOVEMBER. | DECEMBER. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 |
| 2 | FEBRUARY. | MARCH. | APRIL. | MAY. | JUNE. | JULY. | AUGUST. | SEPTEMBER. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. |
| | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 |
| 3 | MARCH. | APRIL. | MAY. | JUNE. | JULY. | AUGUST. | SEPTEMBER. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. |
| | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 |
| 4 | APRIL. | MAY. | JUNE. | JULY. | AUGUST. | SEPTEMBER. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. |
| | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 |
| 5 | MAY. | JUNE. | JULY. | AUGUST. | SEPTEMBER. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | APRIL. |
| | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 |
| 6 | JUNE. | JULY. | AUGUST. | SEPTEMBER. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | APRIL. | MAY. |
| | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 |
| 7 | JULY. | AUGUST. | SEPTEMBER. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | APRIL. | MAY. | JUNE. |
| | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 |
| 8 | AUGUST. | SEPTEMBER. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | APRIL. | MAY. | JUNE. | JULY. |
| | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 |
| 9 | SEPTEMBER. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | APRIL. | MAY. | JUNE. | JULY. | AUGUST. |
| | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 |
| 10 | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | APRIL. | MAY. | JUNE. | JULY. | AUGUST. | SEPTEMBER. |
| | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 |
| 11 | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | APRIL. | MAY. | JUNE. | JULY. | AUGUST. | SEPTEMBER. | OCTOBER. |
| | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 |
| 12 | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | APRIL. | MAY. | JUNE. | JULY. | AUGUST. | SEPTEMBER. | OCTOBER. | NOVEMBER. |
| | 10 20 31 | 10 20 31 | 10 20 28 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 31 | 10 20 30 | 10 20 31 | 10 20 30 |

When the Christian year is bissextile, if the required day should fall after the month of February, one day must be subtracted from the resulting Christian day shewn by the scale.
The column headed "Days" serves to reckon the number of days between any given interval, which may either be done by juxtaposition, or by a pair of compasses.
The same column also shews the day of the week, by simply setting the initial day of the year to its proper Dominical day; the projecting day being accounted Sunday.

## GENERAL TABLE OF THE HIJRA.

*Note.*—The Hijra Chronological Table has been collated with that published in Playfair's 'Chronology,' as several errors of the press were discovered in Warren's 'Kala Sankalita.' The dates are expressed in old or Julian style up to the year A D. 1750, after which they are continued in new or Gregorian style.

In the initial *feriæ*, 1 stands for Sunday, 2 for Monday, etc.

For an explanation of the Muhammadan era, see page 144, and for the application of the present table in conjunction with the calendric scale for the lunar year, see pages 175 and 185.

There are errors in many other published tales of the Hijra, and as those consulting them may thus be led to wrong results, it may be as well here to notice a few of the discrepancies which a cursory examination has discovered. Thus in 'Tables of the Christian and Muhammadan Eras,' published in Calcutta in the year 1790, by James White, the year 1800, A.D., is made a leap year, and all the Christian dates subsequent thereto are consequently in error one day, being in defect.

In the Sudur Dewanee tables[1] the irregularities of the earlier Hijra dates cannot be reconciled on any principle of a single mistake pervading them; and as the false dates have been in a manner officially promulgated at the head of the Government Regulations, it becomes the more necessary to point them out in a conspicuous manner. The Tables begin with the year 1765. The following are the corrections required for the first day of Muharram, up to the year 1197 :—

| A.H. | | | | | A.H. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1178 | *for* | 5th July, | *read* | 1st July, 1764. | 1188 | *for* | 20th Mar., | *read* | 14th Mar. 1774. |
| 1179 | ,, | 24th June, | ,, | 20th June. | 1189 | ,, | 9th Mar., | ,, | 4th Mar. |
| 1180 | ,, | 2nd June, | ,, | 9th June. | 1190 | ,, | 28th Feb., | ,, | 21st Feb. |
| 1181 | ,, | 2nd June, | ,, | 30th May. | 1191 | ,, | 16th Feb., | ,, | 9th Feb. |
| 1182 | ,, | 22nd May, | ,, | 18th May. | 1192 | ,, | 4th Feb., | ,, | 30th Jan. |
| 1183 | ,, | 13th May, | ,, | 7th May. | 1193 | ,, | 22nd Jan., | ,, | 19th Jan. |
| 1184 | ,, | 3rd May, | ,, | 27th April. | 1194 | ,, | 11th Jan., | ,, | 1th Jan. |
| 1185 | ,, | 24th April, | ,, | 16th April. | 1195 | ,, | 30th Dec., | ,, | 28th Dec. |
| 1186 | ,, | 2nd April, | ,, | 4th April. | 1196 | ,, | 18th Dec., | ,, | 17th Dec. |
| 1187 | ,, | 30th Mar., | ,, | 25th Mar. | 1197 | ,, | 8th Dec., | ,, | 7th Dec. |

After this, the differences seldom exceed one day, and are caused by the wrong years being made bissextile. The jalús years of Sháh A'lam are all one year in advance.

Captain Jervis' Tables, printed at Bombay, are correct, differing only occasionally in the position of the intercalary years.

[1] The following, I am informed, is the mode in which the Sudur Dewanee Almanack is prepared. The Pandit of the Court, at the beginning of each English year, submits an almanack for the English and native Eras. One copy of this is kept in the office, and another forwarded to Government.

It may be noticed that the popular commencement of the Hijra year occurs on the first sight of the new moon; but this cannot affect its chronological determination.

TABLE XIII.—*Of correspondence between the Hijra and the Julian and Gregorian Kalendars of Europe, shewing the first day of each year of the Hijra Kalendar.*

| HIJRA YEAR. | CHRISTIAN ERA. | | | HIJRA YEAR. | CHRISTIAN ERA. | | | HIJRA YEAR. | CHRISTIAN ERA. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Year. | Month. | Day. | | Year. | Month. | Day. | | Year. | Month. | Day. |
| 1 | 622 | 16 July... | 6 | 56 B. | 675 | 25 Nov... | 1 | 111 B. | 729 | 5 April.. | 3 |
| 2 B. | 623 | 5 July... | 3 | 57 | 676 | 14 Nov... | 6 | 112 | 730 | 26 March | 1 |
| 3 | 624 | 24 June.. | 1 | 58 | 677 | 3 Nov... | 3 | 113 | 731 | 15 March | 5 |
| 4 | 625 | 13 June.. | 5 | 59 B. | 678 | 23 Oct.... | 7 | 114 B. | 732 | 3 March | 2 |
| 5 B. | 626 | 2 June.. | 2 | 60 | 679 | 13 Oct.... | 5 | 115 | 733 | 21 Feb.... | 7 |
| 6 | 627 | 23 May... | 7 | 61 | 680 | 1 Oct.... | 2 | 116 B. | 734 | 10 Feb.... | 4 |
| 7 B. | 628 | 11 May... | 4 | 62 B. | 681 | 20 Sept... | 6 | 117 | 735 | 31 Jan.... | 2 |
| 8 | 629 | 1 May... | 2 | 63 | 682 | 10 Sept... | 4 | 118 | 736 | 20 Jan.... | 6 |
| 9 | 630 | 20 April.. | 6 | 64 | 683 | 30 Aug... | 1 | 119 B. | 737 | 8 Jan.... | 3 |
| 10 B. | 631 | 9 April.. | 3 | 65 B. | 684 | 18 Aug... | 5 | 120 | 737 | 29 Dec.... | 1 |
| 11 | 632 | 29 March | 1 | 66 | 685 | 8 Aug... | 3 | 121 | 738 | 18 Dec.... | 5 |
| 12 | 633 | 18 March | 5 | 67 B. | 686 | 28 July... | 7 | 122 B. | 739 | 7 Dec.... | 2 |
| 13 B. | 634 | 7 March | 2 | 68 | 687 | 18 July... | 5 | 123 | 740 | 26 Nov... | 7 |
| 14 | 635 | 25 Feb.... | 7 | 69 | 688 | 6 July... | 2 | 124 | 741 | 15 Nov... | 4 |
| 15 | 636 | 14 Feb.... | 4 | 70 B. | 689 | 25 June.. | 6 | 125 B. | 742 | 4 Nov... | 1 |
| 16 B. | 637 | 2 Feb.... | 1 | 71 | 690 | 15 June.. | 4 | 126 | 743 | 25 Oct.... | 6 |
| 17 | 638 | 23 Jan.... | 6 | 72 | 691 | 4 June.. | 1 | 127 B. | 744 | 13 Oct.... | 3 |
| 18 B. | 639 | 12 Jan.... | 3 | 73 B. | 692 | 23 May... | 5 | 128 | 745 | 3 Oct.... | 1 |
| 19 | 640 | 2 Jan.... | 1 | 74 | 693 | 13 May... | 3 | 129 | 746 | 22 Sept... | 5 |
| 20 | 640 | 21 Dec.... | 5 | 75 | 694 | 2 May... | 7 | 130 B. | 747 | 11 Sept... | 2 |
| 21 B. | 641 | 10 Dec.... | 2 | 76 B. | 695 | 21 April.. | 4 | 131 | 748 | 31 Aug... | 7 |
| 22 | 642 | 30 Nov... | 7 | 77 | 696 | 10 April.. | 2 | 132 | 749 | 20 Aug... | 4 |
| 23 | 643 | 19 Nov... | 4 | 78 B. | 697 | 30 March | 6 | 133 B. | 750 | 9 Aug... | 1 |
| 24 B. | 644 | 7 Nov... | 1 | 79 | 698 | 20 March | 4 | 134 | 751 | 30 July... | 6 |
| 25 | 645 | 28 Oct.... | 6 | 80 | 699 | 9 March | 1 | 135 | 752 | 18 July... | 3 |
| 26 B. | 646 | 17 Oct.... | 3 | 81 B. | 700 | 26 Feb.... | 5 | 136 B. | 753 | 7 July... | 7 |
| 27 | 647 | 7 Oct.... | 1 | 82 | 701 | 15 Feb.... | 3 | 137 | 754 | 27 June.. | 5 |
| 28 | 648 | 25 Sept... | 5 | 83 | 702 | 4 Feb.... | 7 | 138 B. | 755 | 16 June.. | 2 |
| 29 B. | 649 | 14 Sept... | 2 | 84 B. | 703 | 24 Jan.... | 4 | 139 | 756 | 5 June.. | 7 |
| 30 | 650 | 4 Sept... | 7 | 85 | 704 | 14 Jan.... | 2 | 140 | 757 | 25 May... | 4 |
| 31 | 651 | 24 Aug... | 4 | 86 B. | 705 | 2 Jan.... | 6 | 141 B. | 758 | 14 May... | 1 |
| 32 B. | 652 | 12 Aug... | 1 | 87 | 705 | 23 Dec.... | 4 | 142 | 759 | 4 May... | 6 |
| 33 | 653 | 2 Aug... | 6 | 88 | 706 | 12 Dec.... | 1 | 143 | 760 | 22 April.. | 3 |
| 34 | 654 | 22 July... | 3 | 89 B. | 707 | 1 Dec.... | 5 | 144 B. | 761 | 11 April.. | 7 |
| 35 B. | 655 | 11 July... | 7 | 90 | 708 | 20 Nov... | 3 | 145 | 762 | 1 April.. | 5 |
| 36 | 656 | 30 June.. | 5 | 91 | 709 | 9 Nov... | 7 | 146 B. | 763 | 21 March | 2 |
| 37 B. | 657 | 19 June.. | 2 | 92 B. | 710 | 29 Oct.... | 4 | 147 | 764 | 10 March | 7 |
| 38 | 658 | 9 June.. | 7 | 93 | 711 | 19 Oct.... | 2 | 148 | 765 | 27 Feb.... | 4 |
| 39 | 659 | 29 May... | 4 | 94 | 712 | 7 Oct.... | 6 | 149 B. | 766 | 16 Feb.... | 1 |
| 40 B. | 660 | 17 May... | 1 | 95 B. | 713 | 26 Sept... | 3 | 150 | 767 | 6 Feb.... | 6 |
| 41 | 661 | 7 May... | 6 | 96 | 714 | 16 Sept... | 1 | 151 | 768 | 26 Jan.... | 3 |
| 42 | 662 | 26 April.. | 3 | 97 B. | 715 | 5 Sept... | 5 | 152 B. | 769 | 14 Jan.... | 7 |
| 43 B. | 663 | 15 April.. | 7 | 98 | 716 | 25 Aug... | 3 | 153 | 770 | 4 Jan.... | 5 |
| 44 | 664 | 4 April.. | 5 | 99 | 717 | 14 Aug... | 7 | 154 | 770 | 24 Dec.... | 2 |
| 45 | 665 | 24 March | 2 | 100 B. | 718 | 3 Aug... | 4 | 155 B. | 771 | 13 Dec.... | 5 |
| 46 B. | 666 | 13 March | 6 | 101 | 719 | 24 July... | 2 | 156 | 772 | 2 Dec.... | 4 |
| 47 | 667 | 3 March | 4 | 102 | 720 | 12 July... | 6 | 157 B. | 773 | 21 Nov... | 1 |
| 48 B. | 668 | 20 Feb.... | 1 | 103 B. | 721 | 1 July... | 3 | 158 | 774 | 11 Nov... | 6 |
| 49 | 669 | 9 Feb.... | 6 | 104 | 722 | 21 June.. | 1 | 159 | 775 | 31 Oct.... | 3 |
| 50 | 670 | 29 Jan.... | 3 | 105 | 723 | 10 June.. | 5 | 160 B. | 776 | 19 Oct.... | 7 |
| 51 B. | 671 | 18 Jan. .. | 7 | 106 B. | 724 | 29 May... | 2 | 161 | 777 | 9 Oct.... | 5 |
| 52 | 672 | 8 Jan.... | 5 | 107 | 725 | 19 May... | 7 | 162 | 778 | 28 Sept... | 2 |
| 53 | 672 | 27 Dec.... | 2 | 108 B. | 726 | 8 May... | 4 | 163 B. | 779 | 17 Sept... | 6 |
| 54 B. | 673 | 16 Dec.... | 6 | 109 | 727 | 28 April.. | 2 | 164 | 780 | 6 Sept... | 4 |
| 55 | 674 | 6 Dec.... | 4 | 110 | 728 | 16 April.. | 6 | 165 | 781 | 26 Aug... | 1 |

| Hijra Year. | Christian Era. | | | Hijra Year. | Christian Era. | | | Hijra Year. | Christian Era. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Year. | Month. | Day. | | Year. | Month. | Day. | | Year. | Month. | Day. |
| 166 B. | 782 | 15 Aug... | 5 | 226 B. | 840 | 31 Oct.... | 1 | 286 B. | 899 | 17 Jan.... | 4 |
| 167 | 783 | 5 Aug... | 3 | 227 | 841 | 21 Oct.... | 6 | 287 | 900 | 7 Jan.... | 2 |
| 168 B. | 784 | 24 July... | 7 | 228 B. | 842 | 10 Oct.... | 3 | 288 B. | 900 | 26 Dec ... | 6 |
| 169 | 785 | 14 July... | 5 | 229 | 843 | 30 Sept... | 1 | 289 | 901 | 16 Dec ... | 4 |
| 170 | 786 | 3 July... | 2 | 230 | 844 | 18 Sept... | 5 | 290 | 902 | 5 Dec ... | 1 |
| 171 B. | 787 | 22 June .. | 6 | 231 B. | 845 | 7 Sept... | 2 | 291 B. | 903 | 24 Nov... | 5 |
| 172 | 788 | 11 June .. | 4 | 232 | 846 | 28 Aug... | 7 | 292 | 904 | 13 Nov. . | 3 |
| 173 | 789 | 31 May... | 1 | 233 | 847 | 17 Aug... | 4 | 293 | 905 | 2 Nov... | 7 |
| 174 B. | 790 | 20 May... | 5 | 234 B. | 848 | 5 Aug... | 1 | 294 B. | 906 | 22 Oct.... | 4 |
| 175 | 791 | 10 May... | 3 | 235 | 849 | 26 July... | 6 | 295 | 907 | 12 Oct.... | 2 |
| 176 B. | 792 | 28 April.. | 7 | 236 B. | 850 | 15 July... | 3 | 296 B. | 908 | 30 Sept... | 6 |
| 177 | 793 | 18 April.. | 5 | 237 | 851 | 5 July... | 1 | 297 | 909 | 20 Sept... | 4 |
| 178 | 794 | 7 April.. | 2 | 238 | 852 | 23 June .. | 5 | 298 | 910 | 9 Sept... | 1 |
| 179 B. | 795 | 27 March | 6 | 239 B. | 853 | 12 June .. | 2 | 299 B. | 911 | 29 Aug... | 5 |
| 180 | 796 | 16 March | 4 | 240 | 854 | 2 June .. | 7 | 300 | 912 | 18 Aug... | 3 |
| 181 | 797 | 5 March | 1 | 241 | 855 | 22 May... | 4 | 301 | 913 | 7 Aug... | 7 |
| 182 B. | 798 | 22 Feb ... | 5 | 242 B. | 856 | 10 May... | 1 | 302 B. | 914 | 27 July... | 4 |
| 183 | 799 | 12 Feb ... | 3 | 243 | 857 | 30 April.. | 6 | 303 | 915 | 17 July... | 2 |
| 184 | 800 | 1 Feb ... | 7 | 244 | 858 | 19 April.. | 3 | 304 | 916 | 5 July... | 6 |
| 185 B. | 801 | 20 Jan.... | 4 | 245 B. | 859 | 8 April.. | 7 | 305 B. | 917 | 24 June... | 3 |
| 186 | 802 | 10 Jan.... | 2 | 246 | 860 | 28 March | 5 | 306 | 918 | 14 June... | 1 |
| 187 B | 802 | 30 Dec ... | 6 | 247 B. | 861 | 17 March | 2 | 307 B. | 919 | 3 June... | 5 |
| 188 | 803 | 20 Dec ... | 4 | 248 | 862 | 7 March | 7 | 308 | 920 | 23 May... | 3 |
| 189 | 804 | 8 Dec ... | 1 | 249 | 863 | 24 Feb ... | 4 | 309 | 921 | 12 May... | 7 |
| 190 B. | 805 | 27 Nov... | 5 | 250 B. | 864 | 13 Feb ... | 1 | 310 B. | 922 | 1 May... | 4 |
| 191 | 806 | 17 Nov... | 3 | 251 | 865 | 2 Feb ... | 6 | 311 | 923 | 21 April.. | 2 |
| 192 | 807 | 6 Nov ... | 7 | 252 | 866 | 22 Jan.... | 3 | 312 | 924 | 9 April.. | 6 |
| 193 B. | 808 | 25 Oct.... | 4 | 253 B. | 867 | 11 Jan.... | 7 | 313 B. | 925 | 29 March | 3 |
| 194 | 809 | 15 Oct.... | 2 | 254 | 868 | 1 Jan.... | 5 | 314 | 926 | 19 March | 1 |
| 195 | 810 | 4 Oct.... | 6 | 255 | 868 | 20 Dec ... | 2 | 315 | 927 | 8 March | 5 |
| 196 B. | 811 | 23 Sept... | 3 | 256 B. | 869 | 10 Dec ... | 7 | 316 B. | 928 | 25 Feb ... | 2 |
| 197 | 812 | 12 Sept... | 1 | 257 | 870 | 29 Nov... | 4 | 317 | 929 | 14 Feb ... | 7 |
| 198 B. | 813 | 1 Sept... | 5 | 258 B. | 871 | 18 Nov... | 1 | 318 B. | 930 | 3 Feb ... | 4 |
| 199 | 814 | 22 Aug... | 3 | 259 | 872 | 7 Nov... | 6 | 319 | 931 | 24 Jan.... | 2 |
| 200 | 815 | 11 Aug... | 7 | 260 | 873 | 27 Oct.... | 3 | 320 | 932 | 13 Jan.... | 6 |
| 201 B. | 816 | 30 July... | 4 | 261 B. | 874 | 16 Oct.... | 7 | 321 B. | 933 | 1 Jan.... | 3 |
| 202 | 817 | 20 July... | 2 | 262 | 875 | 6 Oct.... | 5 | 322 | 933 | 22 Dec ... | 1 |
| 203 | 818 | 9 July... | 6 | 263 | 876 | 24 Sept... | 2 | 323 | 934 | 11 Dec ... | 5 |
| 204 B. | 819 | 28 June .. | 3 | 264 B. | 877 | 13 Sept... | 6 | 324 B. | 935 | 30 Nov... | 2 |
| 205 | 820 | 17 June .. | 1 | 265 | 878 | 3 Sept... | 4 | 325 | 936 | 19 Nov... | 7 |
| 206 B. | 821 | 6 June .. | 5 | 266 B. | 879 | 23 Aug... | 1 | 326 B. | 937 | 8 Nov... | 4 |
| 207 | 822 | 27 May... | 3 | 267 | 880 | 12 Aug... | 6 | 327 | 938 | 29 Oct.... | 2 |
| 208 | 823 | 16 May... | 7 | 268 | 881 | 1 Aug... | 3 | 328 | 939 | 18 Oct.... | 6 |
| 209 B. | 824 | 4 May... | 4 | 269 B. | 882 | 21 July... | 7 | 329 B. | 940 | 6 Oct.... | 3 |
| 210 | 825 | 24 April.. | 2 | 270 | 883 | 11 July... | 5 | 330 | 941 | 26 Sept... | 1 |
| 211 | 826 | 13 April.. | 6 | 271 | 884 | 29 June .. | 2 | 331 | 942 | 15 Sept... | 5 |
| 212 B. | 827 | 2 April.. | 3 | 272 B. | 885 | 18 June .. | 6 | 332 B. | 943 | 4 Sept... | 2 |
| 213 | 828 | 22 March | 1 | 273 | 886 | 8 June .. | 4 | 333 | 944 | 24 Aug... | 7 |
| 214 | 829 | 11 March | 5 | 274 | 887 | 28 May... | 1 | 334 | 945 | 13 Aug... | 4 |
| 215 B. | 830 | 28 Feb ... | 2 | 275 B. | 888 | 16 May... | 5 | 335 B. | 946 | 2 Aug... | 1 |
| 216 | 831 | 18 Feb ... | 7 | 276 | 889 | 6 May... | 3 | 336 | 947 | 23 July... | 6 |
| 217 B. | 832 | 7 Feb ... | 4 | 277 B. | 890 | 25 April.. | 7 | 337 B. | 948 | 14 July... | 3 |
| 218 | 833 | 27 Jan.... | 2 | 278 | 891 | 15 April.. | 5 | 338 | 949 | 1 July... | 1 |
| 219 | 834 | 16 Jan.... | 6 | 279 | 892 | 3 April.. | 2 | 339 | 950 | 20 June... | 5 |
| 220 B. | 835 | 5 Jan.... | 3 | 280 B. | 893 | 23 March | 6 | 340 B. | 951 | 9 June... | 2 |
| 221 | 835 | 26 Dec ... | 1 | 281 | 894 | 13 March | 4 | 341 | 952 | 29 May... | 7 |
| 222 | 836 | 14 Dec ... | 5 | 282 | 895 | 2 March | 1 | 342 | 953 | 18 May... | 4 |
| 223 B. | 837 | 3 Dec ... | 2 | 283 B. | 896 | 19 Feb ... | 5 | 343 B. | 954 | 7 May... | 1 |
| 224 | 838 | 23 Nov... | 7 | 284 | 897 | 8 Feb ... | 3 | 344 | 955 | 27 April.. | 6 |
| 225 | 839 | 12 Nov... | 4 | 285 | 898 | 28 Jan.... | 7 | 345 | 956 | 15 April.. | 3 |

| Hijra Year. | Christian Era. | | | Hijra Year. | Christian Era. | | | Hijra Year. | Christian Era. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Year. | Month. | Day. | | Year. | Month. | Day. | | Year. | Month. | Day. |
| 346 B. | 957 | 4 April | 7 | 406 B. | 1015 | 21 June | 3 | 466 B. | 1073 | 6 Sept. | 6 |
| 347 | 958 | 25 March | 5 | 407 | 1016 | 10 June | 1 | 467 | 1074 | 27 Aug. | 4 |
| 348 B. | 959 | 14 March | 2 | 408 B. | 1017 | 30 May | 5 | 468 B. | 1075 | 16 Aug. | 1 |
| 349 | 960 | 3 March | 7 | 409 | 1018 | 20 May | 3 | 469 | 1076 | 5 Aug. | 6 |
| 350 | 961 | 20 Feb. | 4 | 410 | 1019 | 9 May | 7 | 470 | 1077 | 25 July | 3 |
| 351 B. | 962 | 9 Feb. | 1 | 411 B. | 1020 | 27 April | 4 | 471 B. | 1078 | 14 July | 7 |
| 352 | 963 | 30 Jan. | 6 | 412 | 1021 | 17 April | 2 | 472 | 1079 | 4 July | 5 |
| 353 | 964 | 19 Jan. | 3 | 413 | 1022 | 6 April | 6 | 473 | 1080 | 22 June | 2 |
| 354 B. | 965 | 7 Jan. | 7 | 414 B. | 1023 | 26 March | 3 | 474 B. | 1081 | 11 June | 6 |
| 355 | 965 | 28 Dec. | 5 | 415 | 1024 | 15 March | 1 | 475 | 1082 | 1 June | 4 |
| 356 B. | 966 | 17 Dec. | 2 | 416 B. | 1025 | 4 March | 5 | 476 B. | 1083 | 21 May | 1 |
| 357 | 967 | 7 Dec. | 7 | 417 | 1026 | 22 Feb. | 3 | 477 | 1084 | 10 May | 6 |
| 358 | 968 | 25 Nov. | 4 | 418 | 1027 | 11 Feb. | 7 | 478 | 1085 | 29 April | 3 |
| 359 B. | 969 | 14 Nov. | 1 | 419 B. | 1028 | 31 Jan. | 4 | 479 B. | 1086 | 18 April | 7 |
| 360 | 970 | 4 Nov. | 6 | 420 | 1029 | 20 Jan. | 2 | 480 | 1087 | 8 April | 5 |
| 361 | 971 | 24 Oct. | 3 | 421 | 1030 | 9 Jan. | 6 | 481 | 1088 | 27 March | 2 |
| 362 B. | 972 | 12 Oct. | 7 | 422 B. | 1030 | 29 Dec. | 3 | 482 B. | 1089 | 16 March | 6 |
| 363 | 973 | 2 Oct. | 5 | 423 | 1031 | 19 Dec. | 1 | 483 | 1090 | 6 March | 4 |
| 364 | 974 | 21 Sept. | 2 | 424 | 1032 | 7 Dec. | 5 | 484 | 1091 | 23 Feb. | 1 |
| 365 B. | 975 | 10 Sept. | 6 | 425 B. | 1033 | 26 Nov. | 2 | 485 B. | 1092 | 12 Feb. | 5 |
| 366 | 976 | 30 Aug. | 4 | 426 | 1034 | 16 Nov. | 7 | 486 | 1093 | 1 Feb. | 3 |
| 367 B. | 977 | 19 Aug. | 1 | 427 B. | 1035 | 5 Nov. | 4 | 487 B. | 1094 | 21 Jan. | 7 |
| 368 | 978 | 9 Aug. | 6 | 428 | 1036 | 25 Oct. | 2 | 488 | 1095 | 11 Jan. | 5 |
| 369 | 979 | 29 July | 3 | 429 | 1037 | 14 Oct. | 6 | 489 | 1095 | 31 Dec. | 2 |
| 370 B. | 980 | 17 July | 7 | 430 B. | 1038 | 3 Oct. | 3 | 490 B. | 1096 | 19 Dec. | 6 |
| 371 | 981 | 7 July | 5 | 431 | 1039 | 23 Sept. | 1 | 491 | 1097 | 9 Dec. | 4 |
| 372 | 982 | 26 June | 2 | 432 | 1040 | 11 Sept. | 5 | 492 | 1098 | 28 Nov. | 1 |
| 373 B. | 983 | 15 June | 6 | 433 B. | 1041 | 31 Aug. | 2 | 493 B. | 1099 | 17 Nov. | 5 |
| 374 | 984 | 4 June | 4 | 434 | 1042 | 21 Aug. | 7 | 494 | 1100 | 6 Nov. | 3 |
| 375 | 985 | 24 May | 1 | 435 | 1043 | 10 Aug. | 4 | 495 | 1101 | 26 Oct. | 7 |
| 376 B. | 986 | 13 May | 5 | 436 B. | 1044 | 29 July | 1 | 496 B. | 1102 | 15 Oct. | 4 |
| 377 | 987 | 3 May | 3 | 437 | 1045 | 19 July | 6 | 497 | 1103 | 5 Oct. | 2 |
| 378 B. | 988 | 21 April | 7 | 438 B. | 1046 | 8 July | 3 | 498 B. | 1104 | 23 Sept. | 6 |
| 379 | 989 | 11 April | 5 | 439 | 1047 | 28 June | 1 | 499 | 1105 | 13 Sept. | 4 |
| 380 | 990 | 31 March | 2 | 440 | 1048 | 16 June | 5 | 500 | 1106 | 2 Sept. | 1 |
| 381 B. | 991 | 20 March | 6 | 441 B. | 1049 | 5 June | 2 | 501 B. | 1107 | 22 Aug. | 5 |
| 382 | 992 | 9 March | 4 | 442 | 1050 | 26 May | 7 | 502 | 1108 | 11 Aug. | 3 |
| 383 | 993 | 26 Feb. | 1 | 443 | 1051 | 15 May | 4 | 503 | 1109 | 31 July | 7 |
| 384 B. | 994 | 15 Feb. | 5 | 444 B. | 1052 | 3 May | 1 | 504 B. | 1110 | 20 July | 4 |
| 385 | 995 | 5 Feb. | 3 | 445 | 1053 | 23 April | 6 | 505 | 1111 | 10 July | 2 |
| 386 B. | 996 | 25 Jan. | 7 | 446 B. | 1054 | 12 April | 3 | 506 B. | 1112 | 28 June | 6 |
| 387 | 997 | 14 Jan. | 5 | 447 | 1055 | 2 April | 1 | 507 | 1113 | 18 June | 4 |
| 388 | 998 | 3 Jan. | 2 | 448 | 1056 | 21 March | 5 | 508 | 1114 | 7 June | 1 |
| 389 B. | 998 | 23 Dec. | 6 | 449 B. | 1057 | 10 March | 2 | 509 B. | 1115 | 27 May | 5 |
| 390 | 999 | 13 Dec. | 4 | 450 | 1058 | 28 Feb. | 7 | 510 | 1116 | 16 May | 3 |
| 391 | 1000 | 1 Dec. | 1 | 451 | 1059 | 17 Feb. | 4 | 511 | 1117 | 5 May | 7 |
| 392 B. | 1001 | 20 Nov. | 5 | 452 B. | 1060 | 6 Feb. | 1 | 512 B. | 1118 | 24 April | 4 |
| 393 | 1002 | 10 Nov. | 3 | 453 | 1061 | 26 Jan. | 6 | 513 | 1119 | 14 April | 2 |
| 394 | 1003 | 30 Oct. | 7 | 454 | 1062 | 15 Jan. | 3 | 514 | 1120 | 2 April | 6 |
| 395 B. | 1004 | 18 Oct. | 4 | 455 B. | 1063 | 4 Jan. | 7 | 515 B. | 1121 | 22 March | 3 |
| 396 | 1005 | 8 Oct. | 2 | 456 | 1063 | 25 Dec. | 5 | 516 | 1122 | 12 March | 1 |
| 397 B. | 1006 | 27 Sept. | 6 | 457 B. | 1064 | 13 Dec. | 2 | 517 B. | 1123 | 1 March | 5 |
| 398 | 1007 | 17 Sept. | 4 | 458 | 1065 | 3 Dec. | 7 | 518 | 1124 | 19 Feb. | 3 |
| 399 | 1008 | 5 Sept. | 1 | 459 | 1066 | 22 Nov. | 4 | 519 | 1125 | 7 Feb. | 7 |
| 400 B. | 1009 | 25 Aug. | 5 | 460 B. | 1067 | 11 Nov. | 1 | 520 B. | 1126 | 27 Jan. | 4 |
| 401 | 1010 | 15 Aug. | 3 | 461 | 1068 | 31 Oct. | 6 | 521 | 1127 | 17 Jan. | 2 |
| 402 | 1011 | 4 Aug. | 7 | 462 | 1069 | 20 Oct. | 3 | 522 | 1128 | 6 Jan. | 6 |
| 403 B. | 1012 | 23 July | 4 | 463 B. | 1070 | 9 Oct. | 7 | 523 B. | 1128 | 25 Dec. | 3 |
| 404 | 1013 | 13 July | 2 | 464 | 1071 | 29 Sept. | 5 | 524 | 1129 | 15 Dec. | 1 |
| 405 | 1014 | 2 July | 6 | 465 | 1072 | 17 Sept. | 2 | 525 | 1130 | 4 Dec. | 5 |

| Hijra year. | Christian era. | | | Hijra year. | Christian era. | | | Hijra year. | Christian era. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Year. | Month. | Day. | | Year. | Month. | Day. | | Year. | Month. | Day. |
| 526 B. | 1131 | 23 Nov... | 2 | 586 B. | 1190 | 8 Feb... | 5 | 646 B. | 1248 | 26 April.. | 1 |
| 527 | 1132 | 12 Nov... | 7 | 587 | 1191 | 29 Jan.... | 3 | 647 | 1249 | 16 April.. | 6 |
| 528 B. | 1133 | 1 Nov... | 4 | 588 B. | 1192 | 18 Jan.... | 7 | 648 B. | 1250 | 5 April.. | 3 |
| 529 | 1134 | 22 Oct.... | 2 | 589 | 1193 | 7 Jan.... | 5 | 649 | 1251 | 26 March | 1 |
| 530 | 1135 | 11 Oct.... | 6 | 590 | 1193 | 27 Dec.... | 2 | 650 | 1252 | 14 March | 5 |
| 531 B. | 1136 | 29 Sept... | 3 | 591 B. | 1194 | 16 Dec.... | 6 | 651 B. | 1253 | 3 March | 2 |
| 532 | 1137 | 19 Sept... | 1 | 592 | 1195 | 6 Dec.... | 4 | 652 | 1254 | 21 Feb ... | 7 |
| 533 | 1138 | 8 Sept... | 5 | 593 | 1196 | 24 Nov.. | 1 | 653 | 1255 | 10 Feb ... | 4 |
| 534 B. | 1139 | 28 Aug... | 2 | 594 B. | 1197 | 13 Nov... | 5 | 654 B. | 1256 | 30 Jan.... | 1 |
| 535 | 1140 | 17 Aug... | 7 | 595 | 1198 | 3 Nov... | 3 | 655 | 1257 | 19 Jan.... | 6 |
| 536 B. | 1141 | 6 Aug... | 4 | 596 B. | 1199 | 23 Oct.... | 7 | 656 B. | 1258 | 8 Jan.... | 3 |
| 537 | 1142 | 27 July... | 2 | 597 | 1200 | 12 Oct.... | 5 | 657 | 1258 | 29 Dec.... | 1 |
| 538 | 1143 | 16 July... | 6 | 598 | 1201 | 1 Oct.... | 2 | 658 | 1259 | 18 Dec.... | 5 |
| 539 B. | 1144 | 4 July... | 3 | 599 B. | 1202 | 20 Sept... | 6 | 659 B. | 1260 | 6 Dec.... | 2 |
| 540 | 1145 | 24 June.. | 1 | 600 | 1203 | 10 Sept... | 4 | 660 | 1261 | 26 Nov... | 7 |
| 541 | 1146 | 13 June.. | 5 | 601 | 1204 | 29 Aug... | 1 | 661 | 1262 | 15 Nov... | 4 |
| 542 B. | 1147 | 2 June.. | 2 | 602 B. | 1205 | 18 Aug... | 5 | 662 B. | 1263 | 4 Nov... | 1 |
| 543 | 1148 | 22 May... | 7 | 603 | 1206 | 8 Aug... | 3 | 663 | 1264 | 24 Oct.... | 6 |
| 544 | 1149 | 11 May... | 4 | 604 | 1207 | 28 July... | 7 | 664 | 1265 | 13 Oct.... | 3 |
| 545 B. | 1150 | 30 April.. | 1 | 605 B. | 1208 | 16 July... | 4 | 665 B. | 1266 | 2 Oct.... | 7 |
| 546 | 1151 | 20 April.. | 6 | 606 | 1209 | 6 July... | 2 | 666 | 1267 | 22 Sept... | 5 |
| 547 B. | 1152 | 8 April.. | 3 | 607 B. | 1210 | 25 June... | 6 | 667 B. | 1268 | 10 Sept... | 2 |
| 548 | 1153 | 29 March | 1 | 608 | 1211 | 15 June,.. | 4 | 668 | 1269 | 31 Aug... | 7 |
| 549 | 1154 | 18 March | 5 | 609 | 1212 | 3 June... | 1 | 669 | 1270 | 20 Aug... | 4 |
| 550 B. | 1155 | 7 March | 2 | 610 B. | 1213 | 23 May... | 5 | 670 B. | 1271 | 9 Aug... | 1 |
| 551 | 1156 | 25 Feb ... | 7 | 611 | 1214 | 13 May... | 3 | 671 | 1272 | 29 July... | 6 |
| 552 | 1157 | 13 Feb ... | 4 | 612 | 1215 | 2 May... | 7 | 672 | 1273 | 18 July... | 3 |
| 553 B. | 1158 | 2 Feb ... | 1 | 613 B. | 1216 | 20 April.. | 4 | 673 B. | 1274 | 7 July... | 7 |
| 554 | 1159 | 23 Jan.... | 6 | 614 | 1217 | 10 April.. | 2 | 674 | 1275 | 27 June... | 5 |
| 555 | 1160 | 12 Jan.... | 3 | 615 | 1218 | 30 March | 6 | 675 | 1276 | 15 June... | 2 |
| 556 B. | 1160 | 31 Dec.... | 7 | 616 B. | 1219 | 19 March | 3 | 676 B. | 1277 | 4 June... | 6 |
| 557 | 1161 | 21 Dec.... | 5 | 617 | 1220 | 8 March | 1 | 677 | 1278 | 25 May... | 4 |
| 558 B. | 1162 | 10 Dec ... | 2 | 618 B. | 1221 | 25 Feb ... | 5 | 678 B. | 1279 | 14 May... | 1 |
| 559 | 1163 | 30 Nov... | 7 | 619 | 1222 | 15 Feb ... | 3 | 679 | 1280 | 3 May... | 6 |
| 560 | 1164 | 18 Nov... | 4 | 620 | 1223 | 4 Feb ... | 7 | 680 | 1281 | 22 April.. | 3 |
| 561 B. | 1165 | 7 Nov... | 1 | 621 B. | 1224 | 24 Jan.... | 4 | 681 B. | 1282 | 11 April.. | 7 |
| 562 | 1166 | 28 Oct.... | 6 | 622 | 1225 | 13 Jan.... | 2 | 682 | 1283 | 1 April.. | 5 |
| 563 | 1167 | 17 Oct.... | 3 | 623 | 1226 | 2 Jan.... | 6 | 683 | 1284 | 20 March | 2 |
| 564 B. | 1168 | 5 Oct.... | 7 | 624 B. | 1226 | 22 Dec.... | 3 | 684 B. | 1285 | 9 March | 6 |
| 565 | 1169 | 25 Sept... | 5 | 625 | 1227 | 12 Dec.... | 1 | 685 | 1286 | 27 Feb ... | 4 |
| 566 B. | 1170 | 14 Sept... | 2 | 626 B. | 1228 | 30 Nov... | 5 | 686 B. | 1287 | 16 Feb ... | 1 |
| 567 | 1171 | 4 Sept... | 7 | 627 | 1229 | 20 Nov... | 3 | 687 | 1288 | 6 Feb ... | 6 |
| 568 | 1172 | 23 Aug... | 4 | 628 | 1230 | 9 Nov... | 7 | 688 | 1289 | 25 Jan.... | 3 |
| 569 B. | 1173 | 12 Aug... | 1 | 629 B. | 1231 | 29 Oct.... | 4 | 689 B. | 1290 | 14 Jan.... | 7 |
| 570 | 1174 | 2 Aug... | 6 | 630 | 1232 | 18 Oct.... | 2 | 690 | 1291 | 4 Jan.... | 5 |
| 571 | 1175 | 22 July... | 3 | 631 | 1233 | 7 Oct.... | 6 | 691 | 1291 | 24 Dec.... | 2 |
| 572 B. | 1176 | 10 July... | 7 | 632 B. | 1234 | 26 Sept... | 3 | 692 B. | 1292 | 12 Dec.... | 6 |
| 573 | 1177 | 30 June.. | 5 | 633 | 1235 | 16 Sept... | 1 | 693 | 1293 | 2 Dec.... | 4 |
| 574 | 1178 | 19 June.. | 2 | 634 | 1236 | 4 Sept... | 5 | 694 | 1294 | 21 Nov... | 1 |
| 575 B. | 1179 | 8 June.. | 6 | 635 B. | 1237 | 24 Aug... | 2 | 695 B. | 1295 | 10 Nov... | 5 |
| 576 | 1180 | 28 May... | 4 | 636 | 1238 | 14 Aug... | 7 | 696 | 1296 | 30 Oct.... | 3 |
| 577 B. | 1181 | 17 May... | 1 | 637 B. | 1239 | 3 Aug... | 4 | 697 B. | 1297 | 19 Oct.... | 7 |
| 578 | 1182 | 7 May... | 6 | 638 | 1240 | 23 July... | 2 | 698 | 1298 | 9 Oct.... | 5 |
| 579 | 1183 | 26 April.. | 3 | 639 | 1241 | 12 July... | 6 | 699 | 1299 | 28 Sept... | 2 |
| 580 B. | 1184 | 14 April.. | 7 | 640 B. | 1242 | 1 July... | 3 | 700 B. | 1300 | 16 Sept... | 6 |
| 581 | 1185 | 4 April.. | 5 | 641 | 1243 | 21 June... | 1 | 701 | 1301 | 6 Sept... | 4 |
| 582 | 1186 | 24 March | 2 | 642 | 1244 | 9 June... | 5 | 702 | 1302 | 26 Aug... | 1 |
| 583 B. | 1187 | 13 March | 6 | 643 B. | 1245 | 29 May... | 2 | 703 B. | 1303 | 15 Aug... | 5 |
| 584 | 1188 | 2 March | 4 | 644 | 1246 | 19 May... | 7 | 704 | 1304 | 4 Aug... | 3 |
| 585 | 1189 | 19 Feb... | 1 | 645 | 1247 | 8 May... | 4 | 705 | 1305 | 24 July... | 7 |

| Hijra year. | Christian era. | | | Hijra year. | Christian era. | | | Hijra year. | Christian era. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Year. | Month. | Day. | | Year. | Month. | Day. | | Year. | Month. | Day. |
| 706 B. | 1306 | 13 July... | 4 | 766 B. | 1364 | 28 Sept... | 7 | 826 B. | 1422 | 15 Dec ... | 3 |
| 707 | 1307 | 3 July... | 2 | 767 | 1365 | 18 Sept... | 5 | 827 | 1423 | 5 Dec ... | 1 |
| 708 B. | 1308 | 21 June... | 6 | 768 B. | 1366 | 7 Sept... | 2 | 828 B. | 1424 | 23 Nov... | 5 |
| 709 | 1309 | 11 June. . | 4 | 769 | 1367 | 28 Aug... | 7 | 829 | 1425 | 13 Nov... | 3 |
| 710 | 1310 | 31 May... | 1 | 770 | 1368 | 16 Aug... | 4 | 830 | 1426 | 2 Nov... | 7 |
| 711 B. | 1311 | 20 May... | 5 | 771 B. | 1369 | 5 Aug... | 1 | 831 B. | 1427 | 22 Oct.... | 4 |
| 712 | 1312 | 9 May... | 3 | 772 | 1370 | 26 July... | 6 | 832 | 1428 | 11 Oct.... | 2 |
| 713 | 1313 | 28 April.. | 7 | 773 | 1371 | 15 July... | 3 | 833 | 1429 | 30 Sept... | 6 |
| 714 B. | 1314 | 17 April.. | 4 | 774 B. | 1372 | 3 July... | 7 | 834 B. | 1430 | 19 Sept... | 3 |
| 715 | 1315 | 7 April.. | 2 | 775 | 1373 | 23 June... | 5 | 835 | 1431 | 9 Sept... | 1 |
| 716 B. | 1316 | 26 March | 6 | 776 B. | 1374 | 12 June... | 2 | 836 B. | 1432 | 28 Aug... | 5 |
| 717 | 1317 | 16 March | 4 | 777 | 1375 | 2 June... | 7 | 837 | 1433 | 18 Aug... | 3 |
| 718 | 1318 | 5 March | 1 | 778 | 1376 | 21 May... | 4 | 838 | 1434 | 7 Aug... | 7 |
| 719 B. | 1319 | 22 Feb ... | 5 | 779 B. | 1377 | 10 May... | 1 | 839 B. | 1435 | 27 July... | 4 |
| 720 | 1320 | 12 Feb ... | 3 | 780 | 1378 | 30 April.. | 6 | 840 | 1436 | 16 July... | 2 |
| 721 | 1321 | 31 Jan.... | 7 | 781 | 1379 | 19 April.. | 3 | 841 | 1437 | 5 July... | 6 |
| 722 B. | 1322 | 20 Jan.... | 4 | 782 B. | 1380 | 7 April.. | 7 | 842 B. | 1438 | 24 June... | 3 |
| 723 | 1323 | 10 Jan.... | 2 | 783 | 1381 | 28 March | 5 | 843 | 1439 | 14 June... | 1 |
| 724 | 1323 | 30 Dec ... | 6 | 784 | 1382 | 17 March | 2 | 844 | 1440 | 2 June... | 5 |
| 725 B. | 1324 | 18 Dec ... | 3 | 785 B. | 1383 | 6 March | 6 | 845 B. | 1441 | 22 May... | 2 |
| 726 | 1325 | 8 Dec ... | 1 | 786 | 1384 | 24 Feb ... | 4 | 846 | 1442 | 12 May... | 7 |
| 727 B. | 1326 | 27 Nov... | 5 | 787 B. | 1385 | 12 Feb ... | 1 | 847 B. | 1443 | 1 May... | 4 |
| 728 | 1327 | 17 Nov... | 3 | 788 | 1386 | 2 Feb ... | 6 | 848 | 1444 | 20 April.. | 2 |
| 729 | 1328 | 5 Nov... | 7 | 789 | 1387 | 22 Jan.... | 3 | 849 | 1445 | 9 April.. | 6 |
| 730 B. | 1329 | 25 Oct.... | 4 | 790 B. | 1388 | 11 Jan.... | 7 | 850 B. | 1446 | 29 March | 3 |
| 731 | 1330 | 15 Oct.... | 2 | 791 | 1388 | 31 Dec.... | 5 | 851 | 1447 | 19 March | 1 |
| 732 | 1331 | 4 Oct.... | 6 | 792 | 1389 | 20 Dec.... | 2 | 852 | 1448 | 7 March | 5 |
| 733 B. | 1332 | 22 Sept... | 3 | 793 B. | 1390 | 9 Dec.... | 6 | 853 B. | 1449 | 24 Feb.... | 2 |
| 734 | 1333 | 12 Sept... | 1 | 794 | 1391 | 29 Nov... | 4 | 854 | 1450 | 14 Feb.... | 7 |
| 735 | 1334 | 1 Sept... | 5 | 795 | 1392 | 17 Nov... | 1 | 855 | 1451 | 3 Feb.... | 4 |
| 736 B. | 1335 | 21 Aug... | 2 | 796 B. | 1393 | 6 Nov... | 5 | 856 B. | 1452 | 23 Jan.... | 1 |
| 737 | 1336 | 10 Aug... | 7 | 797 | 1394 | 27 Oct.... | 3 | 857 | 1453 | 12 Jan.... | 6 |
| 738 B. | 1337 | 30 July... | 4 | 798 B. | 1395 | 16 Oct.... | 7 | 858 B. | 1454 | 1 Jan.... | 3 |
| 739 | 1338 | 20 July... | 2 | 799 | 1396 | 5 Oct.... | 5 | 859 | 1454 | 22 Dec ... | 1 |
| 740 | 1339 | 9 July .. | 6 | 800 | 1397 | 24 Sept... | 2 | 860 | 1455 | 11 Dec ... | 5 |
| 741 B. | 1340 | 27 June... | 3 | 801 B. | 1398 | 13 Sept... | 6 | 861 B. | 1456 | 29 Nov... | 2 |
| 742 | 1341 | 17 June... | 1 | 802 | 1399 | 3 Sept... | 4 | 862 | 1457 | 19 Nov... | 7 |
| 743 | 1342 | 6 June... | 5 | 803 | 1400 | 22 Aug... | 1 | 863 | 1458 | 8 Nov... | 4 |
| 744 B. | 1343 | 24 May... | 2 | 804 B. | 1401 | 11 Aug... | 5 | 864 B. | 1459 | 28 Oct.... | 1 |
| 745 | 1344 | 15 May... | 7 | 805 | 1402 | 1 Aug... | 3 | 865 | 1460 | 17 Oct.... | 6 |
| 746 B. | 1345 | 4 May... | 4 | 806 B. | 1403 | 21 July... | 7 | 866 B. | 1461 | 6 Oct. ... | 3 |
| 747 | 1346 | 24 April.. | 2 | 807 | 1404 | 10 July... | 5 | 867 | 1462 | 26 Sept... | 1 |
| 748 | 1347 | 13 April.. | 6 | 808 | 1405 | 29 June... | 2 | 868 | 1463 | 15 Sept... | 5 |
| 749 B. | 1348 | 1 April.. | 3 | 809 B. | 1406 | 18 June... | 6 | 869 B. | 1464 | 3 Sept... | 2 |
| 750 | 1349 | 22 March | 1 | 810 | 1407 | 8 June... | 4 | 870 | 1465 | 24 Aug... | 7 |
| 751 | 1350 | 11 March | 5 | 811 | 1408 | 27 May... | 1 | 871 | 1466 | 13 Aug... | 4 |
| 752 B. | 1351 | 28 Feb ... | 2 | 812 B. | 1409 | 16 May... | 5 | 872 B. | 1467 | 2 Aug... | 1 |
| 753 | 1352 | 18 Feb ... | 7 | 813 | 1410 | 6 May... | 3 | 873 | 1468 | 22 July... | 6 |
| 754 | 1353 | 6 Feb ... | 4 | 814 | 1411 | 25 April.. | 7 | 874 | 1469 | 11 July... | 3 |
| 755 B. | 1354 | 26 Jan.... | 1 | 815 B. | 1412 | 13 April.. | 4 | 875 B. | 1470 | 30 June... | 7 |
| 756 | 1355 | 16 Jan.... | 6 | 816 | 1413 | 3 April.. | 2 | 876 | 1471 | 20 June... | 5 |
| 757 B. | 1356 | 5 Jan.... | 3 | 817 B. | 1414 | 23 March | 6 | 877 B. | 1472 | 8 June... | 2 |
| 758 | 1356 | 25 Dec ... | 1 | 818 | 1415 | 13 March | 4 | 878 | 1473 | 29 May... | 7 |
| 759 | 1357 | 14 Dec ... | 5 | 819 | 1416 | 1 March | 1 | 879 | 1474 | 18 May... | 4 |
| 760 B. | 1358 | 3 Dec ... | 2 | 820 B. | 1417 | 18 Feb.... | 5 | 880 B. | 1475 | 7 May... | 1 |
| 761 | 1359 | 23 Nov... | 7 | 821 | 1418 | 8 Feb.... | 3 | 881 | 1476 | 26 April.. | 6 |
| 762 | 1360 | 11 Nov... | 4 | 822 | 1419 | 28 Jan.... | 7 | 882 | 1477 | 15 April.. | 3 |
| 763 B. | 1361 | 31 Oct.... | 1 | 823 B. | 1420 | 17 Jan.... | 4 | 883 B. | 1478 | 4 April.. | 7 |
| 764 | 1362 | 21 Oct.... | 6 | 824 | 1421 | 6 Jan.... | 2 | 884 | 1479 | 25 March | 5 |
| 765 | 1363 | 10 Oct.... | 3 | 825 | 1421 | 26 Dec.... | 6 | 885 | 1480 | 13 March | 2 |

| Hijra year. | Christian era. | | | Hijra year. | Christian era. | | | Hijra year. | Christian era. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Year. | Month. | Day. | | Year. | Month. | Day. | | Year. | Month. | Day. |
| 886 B. | 1481 | 2 March | 6 | 946 B. | 1539 | 19 May... | 2 | 1006 B. | 1597 | 4 Aug... | 5 |
| 887 | 1482 | 20 Feb ... | 4 | 947 | 1540 | 8 May... | 7 | 1007 | 1598 | 25 July... | 3 |
| 888 B. | 1483 | 9 Feb ... | 1 | 948 B. | 1541 | 27 April.. | 4 | 1008 B. | 1599 | 14 July... | 7 |
| 889 | 1484 | 30 Jan.... | 6 | 949 | 1542 | 17 April.. | 2 | 1009 | 1600 | 3 July... | 5 |
| 890 | 1485 | 18 Jan.... | 3 | 950 | 1543 | 6 April.. | 6 | 1010 | 1601 | 22 June.. | 2 |
| 891 B. | 1486 | 7 Jan.... | 7 | 951 B | 1544 | 25 March | 3 | 1011 B. | 1602 | 11 June... | 6 |
| 892 | 1486 | 28 Dec .... | 5 | 952 | 1545 | 15 March | 1 | 1012 | 1603 | 1 June... | 4 |
| 893 | 1487 | 17 Dec ... | 2 | 953 | 1546 | 4 March | 5 | 1013 | 1604 | 20 May... | 1 |
| 894 B. | 1488 | 5 Dec ... | 6 | 954 B. | 1547 | 21 Feb ... | 2 | 1014 B. | 1605 | 9 May... | 5 |
| 895 | 1489 | 25 Nov... | 4 | 955 | 1548 | 11 Feb ... | 7 | 1015 | 1606 | 29 April.. | 3 |
| 896 B. | 1490 | 14 Nov... | 1 | 956 B. | 1549 | 30 Jan.... | 4 | 1016 B. | 1607 | 18 April.. | 7 |
| 897 | 1491 | 4 Nov... | 6 | 957 | 1550 | 20 Jan.... | 2 | 1017 | 1608 | 7 April.. | 5 |
| 898 | 1492 | 23 Oct.... | 3 | 958 | 1551 | 9 Jan.... | 6 | 1018 | 1609 | 27 March | 2 |
| 899 B. | 1493 | 12 Oct.... | 7 | 959 B. | 1551 | 29 Dec.... | 3 | 1019 B. | 1610 | 16 March | 6 |
| 900 | 1494 | 2 Oct.... | 5 | 960 | 1552 | 18 Dec.... | 1 | 1020 | 1611 | 6 March | 4 |
| 901 | 1495 | 21 Sept... | 2 | 961 | 1553 | 7 Dec.... | 5 | 1021 | 1612 | 23 Feb ... | 1 |
| 902 B. | 1496 | 9 Sept... | 6 | 962 B. | 1554 | 26 Nov... | 2 | 1022 B. | 1613 | 11 Feb ... | 5 |
| 903 | 1497 | 30 Aug... | 4 | 963 | 1555 | 16 Nov... | 7 | 1023 | 1614 | 1 Feb ... | 3 |
| 904 | 1498 | 19 Aug... | 1 | 964 | 1556 | 4 Nov... | 4 | 1024 | 1615 | 21 Jan.... | 7 |
| 905 B. | 1499 | 8 Aug... | 5 | 965 B. | 1557 | 24 Oct.... | 1 | 1025 B. | 1616 | 10 Jan.... | 4 |
| 906 | 1500 | 28 July... | 3 | 966 | 1558 | 14 Oct.... | 6 | 1026 | 1617 | 30 Dec ... | 2 |
| 907 B. | 1501 | 17 July... | 7 | 967 B. | 1559 | 3 Oct.... | 3 | 1027 B. | 1617 | 19 Dec ... | 6 |
| 908 | 1502 | 7 July... | 5 | 968 | 1560 | 22 Sept... | 1 | 1028 | 1618 | 9 Dec ... | 4 |
| 909 | 1503 | 26 June... | 2 | 969 | 1561 | 11 Sept... | 5 | 1029 | 1619 | 28 Nov... | 1 |
| 910 B. | 1504 | 14 June... | 6 | 970 B. | 1562 | 31 Aug... | 2 | 1030 B. | 1620 | 16 Nov... | 5 |
| 911 | 1505 | 4 June... | 4 | 971 | 1563 | 21 Aug... | 7 | 1031 | 1621 | 6 Nov ... | 3 |
| 912 | 1506 | 24 May.. | 1 | 972 | 1564 | 9 Aug... | 4 | 1032 | 1622 | 26 Oct.... | 7 |
| 913 B. | 1507 | 13 May... | 5 | 973 B. | 1565 | 29 July... | 1 | 1033 B. | 1623 | 15 Oct.... | 4 |
| 914 | 1508 | 2 May... | 3 | 974 | 1566 | 19 July... | 6 | 1034 | 1624 | 4 Oct.... | 2 |
| 915 | 1509 | 21 April.. | 7 | 975 | 1567 | 8 July... | 3 | 1035 | 1625 | 23 Sept... | 6 |
| 916 B. | 1510 | 10 April.. | 4 | 976 B. | 1568 | 26 June... | 7 | 1036 B. | 1626 | 12 Sept... | 3 |
| 917 | 1511 | 31 March | 2 | 977 | 1569 | 16 June... | 5 | 1037 | 1627 | 2 Sept... | 1 |
| 918 B. | 1512 | 19 March | 6 | 978 B. | 1570 | 5 June... | 2 | 1038 B. | 1628 | 21 Aug... | 5 |
| 919 | 1513 | 9 March | 4 | 979 | 1571 | 26 May... | 7 | 1039 | 1629 | 11 Aug... | 3 |
| 920 | 1514 | 26 Feb ... | 1 | 980 | 1572 | 14 May... | 4 | 1040 | 1630 | 31 July... | 7 |
| 921 B. | 1515 | 15 Feb ... | 5 | 981 B. | 1573 | 3 May.. | 1 | 1041 B. | 1631 | 20 July... | 4 |
| 922 | 1516 | 5 Feb ... | 3 | 982 | 1574 | 23 April.. | 6 | 1042 | 1632 | 9 July... | 2 |
| 923 | 1517 | 24 Jan.... | 7 | 983 | 1575 | 12 April.. | 3 | 1043 | 1633 | 28 June.. | 6 |
| 924 B. | 1518 | 13 Jan.... | 4 | 984 B. | 1576 | 31 March | 7 | 1044 B. | 1634 | 17 June... | 3 |
| 925 | 1519 | 3 Jan.... | 2 | 985 | 1577 | 21 March | 5 | 1045 | 1635 | 7 June... | 1 |
| 926 B. | 1519 | 23 Dec ... | 6 | 986 B. | 1578 | 10 March | 2 | 1046 B. | 1636 | 26 May... | 5 |
| 927 | 1520 | 12 Dec ... | 4 | 987 | 1579 | 28 Feb ... | 7 | 1047 | 1637 | 16 May... | 3 |
| 928 | 1521 | 1 Dec ... | 1 | 988 | 1580 | 17 Feb ... | 4 | 1048 | 1638 | 5 May... | 7 |
| 929 B. | 1522 | 20 Nov... | 5 | 989 B. | 1581 | 5 Feb ... | 1 | 1049 B. | 1639 | 24 April.. | 4 |
| 930 | 1523 | 10 Nov... | 3 | 990 | 1582 | 26 Jan.... | 6 | 1050 | 1640 | 13 April.. | 2 |
| 931 | 1524 | 29 Oct.... | 7 | 991 | 1583 | 15 Jan.... | 3 | 1051 | 1641 | 2 April.. | 6 |
| 932 B. | 1525 | 18 Oct.... | 4 | 992 B. | 1584 | 4 Jan.... | 7 | 1052 B. | 1642 | 22 March | 3 |
| 933 | 1526 | 8 Oct.... | 2 | 993 | 1584 | 24 Dec.... | 5 | 1053 | 1643 | 12 March | 1 |
| 934 | 1527 | 27 Sept... | 6 | 994 | 1585 | 13 Dec.... | 2 | 1054 | 1644 | 29 Feb ... | 5 |
| 935 B. | 1528 | 15 Sept... | 3 | 995 B. | 1586 | 2 Dec.... | 6 | 1055 B. | 1645 | 17 Feb ... | 2 |
| 936 | 1529 | 5 Sept... | 1 | 996 | 1587 | 22 Nov... | 4 | 1056 | 1646 | 7 Feb ... | 7 |
| 937 B. | 1530 | 25 Aug... | 5 | 997 B. | 1588 | 10 Nov... | 1 | 1057 B. | 1647 | 27 Jan.... | 4 |
| 938 | 1531 | 15 Aug... | 3 | 998 | 1589 | 31 Oct.... | 6 | 1058 | 1648 | 17 Jan.... | 2 |
| 939 | 1532 | 3 Aug... | 7 | 999 | 1590 | 20 Oct.... | 3 | 1059 | 1649 | 5 Jan.... | 6 |
| 940 B. | 1533 | 23 July... | 4 | 1000 B. | 1591 | 9 Oct.... | 7 | 1060 B. | 1650 | 25 Dec ... | 3 |
| 941 | 1534 | 13 July .. | 2 | 1001 | 1592 | 28 Sept... | 5 | 1061 | 1650 | 15 Dec ... | 1 |
| 942 | 1535 | 2 July... | 6 | 1002 | 1593 | 17 Sept... | 2 | 1062 | 1651 | 4 Dec ... | 5 |
| 943 B. | 1536 | 20 June... | 3 | 1003 B. | 1594 | 6 Sept... | 6 | 1063 B. | 1652 | 22 Nov... | 2 |
| 944 | 1537 | 10 June... | 1 | 1004 | 1595 | 27 Aug... | 4 | 1064 | 1653 | 12 Nov... | 7 |
| 945 | 1538 | 30 May... | 5 | 1005 | 1596 | 15 Aug... | 1 | 1065 | 1654 | 1 Nov... | 4 |

| Hijra year. | Christian era. | | | Hijra year. | Christian era. | | | Hijra year. | Christian era. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Year. | Month. | Day. | | Year. | Month. | Day. | | Year. | Month. | Day. |
| 1066 B. | 1655 | 21 Oct.... | 1 | 1126 B. | 1714 | 6 Jan.... | 4 | 1186 B. | 1772 | 4 April. | 7 |
| 1067 | 1656 | 10 Oct.... | 6 | 1127 | 1715 | 27 Dec.... | 2 | 1187 | 1773 | 25 March | 5 |
| 1068 B. | 1657 | 29 Sept... | 3 | 1128 B. | 1715 | 16 Dec.... | 6 | 1188 B. | 1774 | 14 March | 2 |
| 1069 | 1658 | 19 Sept... | 1 | 1129 | 1716 | 5 Dec.... | 4 | 1189 | 1775 | 4 March | 7 |
| 1070 | 1659 | 8 Sept... | 5 | 1130 | 1717 | 24 Nov... | 1 | 1190 | 1776 | 21 Feb ... | 4 |
| 1071 B. | 1660 | 27 Aug... | 2 | 1131 B. | 1718 | 13 Nov... | 5 | 1191 B. | 1777 | 9 Feb ... | 1 |
| 1072 | 1661 | 17 Aug... | 7 | 1132 | 1719 | 3 Nov... | 3 | 1192 | 1778 | 30 Jan.... | 6 |
| 1073 | 1662 | 6 Aug... | 4 | 1133 | 1720 | 22 Oct.... | 7 | 1193 | 1779 | 19 Jan.... | 3 |
| 1074 B. | 1663 | 26 July... | 1 | 1134 B. | 1721 | 11 Oct.... | 4 | 1194 B. | 1780 | 8 Jan.... | 7 |
| 1075 | 1664 | 15 July... | 6 | 1135 | 1722 | 1 Oct.... | 2 | 1195 | 1780 | 28 Dec.... | 5 |
| 1076 B. | 1665 | 4 July... | 3 | 1136 B. | 1723 | 20 Sept... | 6 | 1196 B. | 1781 | 17 Dec.... | 2 |
| 1077 | 1666 | 24 June.. | 1 | 1137 | 1724 | 9 Sept... | 4 | 1197 | 1782 | 7 Dec.... | 7 |
| 1078 | 1667 | 13 June.. | 5 | 1138 | 1725 | 29 Aug... | 1 | 1198 | 1783 | 26 Nov... | 4 |
| 1079 B. | 1668 | 1 June.. | 2 | 1139 B. | 1726 | 18 Aug... | 5 | 1199 B. | 1784 | 14 Nov... | 1 |
| 1080 | 1669 | 22 May... | 7 | 1140 | 1727 | 8 Aug... | 3 | 1200 | 1785 | 4 Nov... | 6 |
| 1081 | 1670 | 11 May... | 4 | 1141 | 1728 | 27 July... | 7 | 1201 | 1786 | 24 Oct.... | 3 |
| 1082 B. | 1671 | 30 April.. | 1 | 1142 B. | 1729 | 16 July... | 4 | 1202 B. | 1787 | 13 Oct.... | 7 |
| 1083 | 1672 | 19 April.. | 6 | 1143 | 1730 | 6 July... | 2 | 1203 | 1788 | 2 Oct.... | 5 |
| 1084 | 1673 | 8 April.. | 3 | 1144 | 1731 | 25 June.. | 6 | 1204 | 1789 | 21 Sept... | 2 |
| 1085 B. | 1674 | 28 March | 7 | 1145 B. | 1732 | 13 June.. | 3 | 1205 B. | 1790 | 10 Sept... | 6 |
| 1086 | 1675 | 18 March | 5 | 1146 | 1733 | 3 June.. | 1 | 1206 | 1791 | 31 Aug... | 4 |
| 1087 B. | 1676 | 6 March | 2 | 1147 B. | 1734 | 23 May... | 5 | 1207 B. | 1792 | 19 Aug... | 1 |
| 1088 | 1677 | 24 Feb ... | 7 | 1148 | 1735 | 13 May... | 3 | 1208 | 1793 | 9 Aug... | 6 |
| 1089 | 1678 | 13 Feb ... | 4 | 1149 | 1736 | 1 May... | 7 | 1209 | 1794 | 29 July... | 3 |
| 1090 B. | 1679 | 2 Feb ... | 1 | 1150 B. | 1737 | 20 April.. | 4 | 1210 B. | 1795 | 18 July... | 7 |
| 1091 | 1680 | 23 Jan.... | 6 | 1151 | 1738 | 10 April . | 2 | 1211 | 1796 | 7 July... | 5 |
| 1092 | 1681 | 11 Jan.... | 3 | 1152 | 1739 | 30 March | 6 | 1212 | 1797 | 26 June .. | 2 |
| 1093 B. | 1681 | 31 Dec.... | 7 | 1153 B. | 1740 | 18 March | 3 | 1213 B. | 1798 | 15 June .. | 6 |
| 1094 | 1682 | 21 Dec.... | 5 | 1154 | 1741 | 8 March | 1 | 1214 | 1799 | 5 June .. | 4 |
| 1095 | 1683 | 10 Dec.... | 2 | 1155 | 1742 | 26 Feb.... | 5 | 1215 | 1800 | 25 May... | 1 |
| 1096 B. | 1684 | 28 Nov... | 6 | 1156 B. | 1743 | 14 Feb.... | 2 | 1216 B. | 1801 | 14 May... | 5 |
| 1097 | 1685 | 18 Nov... | 4 | 1157 | 1744 | 4 Feb.... | 7 | 1217 | 1802 | 4 May... | 3 |
| 1098 B. | 1686 | 7 Nov... | 1 | 1158 B. | 1745 | 23 Jan.... | 4 | 1218 B. | 1803 | 23 April.. | 7 |
| 1099 | 1687 | 28 Oct.... | 6 | 1159 | 1746 | 13 Jan.... | 2 | 1219 | 1804 | 12 April.. | 5 |
| 1100 | 1688 | 16 Oct.... | 3 | 1160 | 1747 | 2 Jan.... | 6 | 1220 | 1805 | 1 April.. | 2 |
| 1101 B. | 1689 | 5 Oct.... | 7 | 1161 B. | 1748 | 22 Dec.... | 3 | 1221 B. | 1806 | 21 March | 6 |
| 1102 | 1690 | 25 Sept... | 5 | 1162 | 1748 | 11 Dec.... | 1 | 1222 | 1807 | 11 March | 4 |
| 1103 | 1691 | 14 Sept... | 2 | 1163 | 1749 | 30 Nov... | 5 | 1223 | 1808 | 28 Feb ... | 1 |
| 1104 B. | 1692 | 2 Sept... | 6 | 1164 B. | 1750 | 19 Nov... | 2 | 1224 B. | 1809 | 16 Feb ... | 5 |
| 1105 | 1693 | 23 Aug... | 4 | 1165 | 1751 | 9 Nov... | 7 | 1225 | 1810 | 6 Feb ... | 3 |
| 1106 B. | 1694 | 12 Aug... | 1 | 1166 B. | 1752 | 8 Nov. n.s | 4 | 1226 B. | 1811 | 26 Jan.... | 7 |
| 1107 | 1695 | 2 Aug... | 6 | 1167 | 1753 | 29 Oct.... | 2 | 1227 | 1812 | 16 Jan.... | 5 |
| 1108 | 1696 | 21 July... | 3 | 1168 | 1754 | 18 Oct.... | 6 | 1228 | 1813 | 4 Jan.... | 2 |
| 1109 B. | 1697 | 10 July... | 7 | 1169 B. | 1755 | 7 Oct.... | 3 | 1229 B. | 1813 | 24 Dec.... | 6 |
| 1110 | 1698 | 30 June.. | 5 | 1170 | 1756 | 26 Sept... | 1 | 1230 | 1814 | 14 Dec.... | 4 |
| 1111 | 1699 | 19 June.. | 2 | 1171 | 1757 | 15 Sept... | 5 | 1231 | 1815 | 3 Dec.... | 1 |
| 1112 B. | 1700 | 7 June.. | 6 | 1172 B. | 1758 | 4 Sept... | 2 | 1232 B. | 1816 | 21 Nov... | 5 |
| 1113 | 1701 | 28 May... | 4 | 1173 | 1759 | 25 Aug... | 7 | 1233 | 1817 | 11 Nov... | 3 |
| 1114 | 1702 | 17 May... | 1 | 1174 | 1760 | 13 Aug... | 4 | 1234 | 1818 | 31 Oct.... | 7 |
| 1115 B. | 1703 | 6 May... | 5 | 1175 B. | 1761 | 2 Aug... | 1 | 1235 B. | 1819 | 20 Oct.... | 4 |
| 1116 | 1704 | 25 April.. | 3 | 1176 | 1762 | 23 July.. | 6 | 1236 | 1820 | 9 Oct.... | 2 |
| 1117 B. | 1705 | 14 April.. | 7 | 1177 B. | 1763 | 12 July... | 3 | 1237 B. | 1821 | 28 Sept... | 6 |
| 1118 | 1706 | 4 April.. | 5 | 1178 | 1764 | 1 July... | 1 | 1238 | 1822 | 18 Sept... | 4 |
| 1119 | 1707 | 24 March | 2 | 1179 | 1765 | 20 June.. | 5 | 1239 | 1823 | 7 Sept... | 1 |
| 1120 B. | 1708 | 12 March | 6 | 1180 B. | 1766 | 9 June.. | 2 | 1240 B. | 1824 | 26 Aug... | 5 |
| 1121 | 1709 | 2 March | 4 | 1181 | 1767 | 30 May... | 7 | 1241 | 1825 | 16 Aug... | 3 |
| 1122 | 1710 | 19 Feb ... | 1 | 1182 | 1768 | 18 May... | 4 | 1242 | 1826 | 5 Aug... | 7 |
| 1123 B. | 1711 | 8 Feb ... | 5 | 1183 B. | 1769 | 7 May... | 1 | 1243 B. | 1827 | 25 July... | 4 |
| 1124 | 1712 | 29 Jan.... | 3 | 1184 | 1770 | 27 April.. | 6 | 1244 | 1828 | 14 July... | 2 |
| 1125 | 1713 | 17 Jan.... | 7 | 1185 | 1771 | 16 April.. | 3 | 1245 | 1829 | 3 July... | 6 |

| Hijra Year. | Christian Era. | | | Hijra Year. | Christian Era. | | | Hijra Year. | Christian Era. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Year. | Month. | Day. | | Year. | Month. | Day. | | Year. | Month. | Day. |
| 1246 B. | 1830 | 22 June.. | 3 | 1271 | 1854 | 24 Sept... | 1 | 1295 B. | 1878 | 5 Jan.... | 7 |
| 1247 | 1831 | 12 June.. | 1 | 1272 | 1855 | 13 Sept... | 5 | 1296 | 1878 | 26 Dec ... | 5 |
| 1248 B. | 1832 | 31 May... | 5 | 1273 B. | 1856 | 1 Sept... | 2 | 1297 B. | 1879 | 15 Dec ... | 2 |
| 1249 | 1833 | 21 May... | 3 | 1274 | 1857 | 22 Aug... | 7 | 1298 | 1880 | 4 Dec ... | 7 |
| 1250 | 1834 | 10 May... | 7 | 1275 | 1858 | 11 Aug... | 4 | 1299 | 1881 | 23 Nov... | 4 |
| 1251 B. | 1835 | 29 April.. | 4 | 1276 B. | 1859 | 31 July... | 1 | 1300 B. | 1882 | 12 Nov... | 1 |
| 1252 | 1836 | 18 April.. | 2 | 1277 | 1860 | 20 July... | 6 | 1301 | 1883 | 2 Nov... | 6 |
| 1253 | 1837 | 7 April.. | 6 | 1278 B. | 1861 | 9 July... | 3 | 1302 | 1884 | 21 Oct.... | 3 |
| 1254 B. | 1838 | 27 March | 3 | 1279 | 1862 | 29 June.. | 1 | 1303 B. | 1885 | 10 Oct.... | 7 |
| 1255 | 1839 | 17 March | 1 | 1280 | 1863 | 18 June.. | 5 | 1304 | 1886 | 30 Sept... | 5 |
| 1256 B. | 1840 | 5 March | 5 | 1281 B. | 1864 | 6 June.. | 2 | 1305 | 1887 | 19 Sept... | 2 |
| 1257 | 1841 | 23 Feb ... | 3 | 1282 | 1865 | 27 May... | 7 | 1306 B. | 1888 | 7 Sept... | 6 |
| 1258 | 1842 | 12 Feb... | 7 | 1283 | 1866 | 16 May... | 4 | 1307 | 1889 | 28 Aug... | 4 |
| 1259 B. | 1843 | 1 Feb ... | 4 | 1284 B. | 1867 | 6 May... | 1 | 1308 B. | 1890 | 17 Aug... | 1 |
| 1260 | 1844 | 22 Jan.... | 2 | 1285 | 1868 | 24 April.. | 6 | 1309 | 1891 | 7 Aug... | 6 |
| 1261 | 1845 | 10 Jan.... | 6 | 1286 B. | 1869 | 13 April.. | 3 | 1310 | 1892 | 26 July... | 3 |
| 1262 B. | 1845 | 30 Dec ... | 3 | 1287 | 1870 | 3 April.. | 1 | 1311 B. | 1893 | 15 July... | 7 |
| 1263 | 1846 | 20 Dec ... | 1 | 1288 | 1871 | 23 March | 5 | 1312 | 1894 | 5 July... | 5 |
| 1264 | 1847 | 9 Dec ... | 5 | 1289 B. | 1872 | 11 March | 2 | 1313 | 1895 | 24 June.. | 2 |
| 1265 B. | 1848 | 27 Nov... | 2 | 1290 | 1873 | 1 March | 7 | 1314 B. | 1896 | 12 June.. | 6 |
| 1266 | 1849 | 17 Nov... | 7 | 1291 | 1874 | 18 Feb ... | 4 | 1315 | 1897 | 2 June.. | 4 |
| 1267 B. | 1850 | 6 Nov... | 4 | 1292 B. | 1875 | 7 Feb ... | 1 | 1316 B. | 1898 | 22 May... | 1 |
| 1268 | 1851 | 27 Oct.... | 2 | 1293 | 1876 | 28 Jan.... | 6 | 1317 | 1899 | 12 May... | 6 |
| 1269 | 1852 | 15 Oct.... | 6 | 1294 | 1877 | 16 Jan.... | 3 | 1318 | 1900 | 1 May... | 3 |
| 1270 B. | 1853 | 4 Oct.... | 3 | | | | | | | | |

## Note Regarding the Chronological Tables of the Hindú Æras.

In consequence of the want of width in an octavo page, it has been found necessary to break the following table into two parts, instead of exhibiting in one line and view, the whole series of the sidereal and luni-solar æras; which would have been more convenient for reference. In other respects the numbers of the several columns, etc., remain as stated in the text.

| SOLAR YEAR. | | PART I.—HINDU SIDEREAL YEARS. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. | II. | III. | IV. | V. | VI. | VII. | | | VIII. | IX. | X. | XI. |
| | | Years beginning on entrance of the Sun into Aries of the Sidereal Zodiac. | | | | | | | CYCLES. | | | |
| CHRISTIAN YEAR. A. D. | First day of ditto. | Kali-yug. | Śāka. | Bengāli San.* | Initial date of all three in March O.S. | Character of the year. | First weekly day of ditto. | Indian hour and minute of Sankrānta or ☉ enters constellation ♈. D. G. P. | Cycle of 1000 years of Parasurāma, beginning in September. | Initial date in September. | Cycle of Grahaparivṛitti | Cycle of Vṛihaspati, (Bengal account). | Do. (Tamul account.) |
| B.1600 | Tu. | 4701 | 1522 | 1007 | Th. 27 | B. | (4) | 54 35 | 776 | 10 | 5 | 43 | 34 |
| 1601 | Th. | 4702 | 1523 | 1008 | Sa. 28 | | (6) | 10 6 | 777 | 11 | 6 | 44 | 35 |
| 1602 | Fr. | 4703 | 1524 | 1009 | Su. 28 | | (0) | 25 37 | 778 | 11 | 7 | 45 | 36 |
| 1603 | Sa. | 4704 | 1525 | 1010 | Mo. 28 | | (1) | 41 8 | 779 | 11 | 8 | 46 | 37 |
| B.1604 | Su. | 4705 | 1526 | 1011 | Tu. 27 | B. | (2) | 56 40 | 780 | 10 | 9 | 47 | 38 |
| 1605 | Tu. | 4706 | 1527 | 1012 | Th. 28 | | (4) | 12 11 | 781 | 10 | 10 | 48 | 39 |
| 1606 | We. | 4707 | 1528 | 1013 | Fr. 28 | | (5) | 27 42 | 782 | 11 | 11 | 49 | 40 |
| 1607 | Th. | 4708 | 1529 | 1014 | Sa. 28 | | (6) | 43 13 | 783 | 11 | 12 | 50 | 41 |
| B.1608 | Fr. | 4709 | 1530 | 1015 | Su. 27 | B. | (0) | 58 45 | 784 | 10 | 13 | 51 | 42 |
| 1609 | Su. | 4710 | 1531 | 1016 | Tu. 28 | | (2) | 14 16 | 785 | 10 | 14 | 52 | 43 |
| 1610 | Mo. | 4711 | 1532 | 1017 | We. 28 | | (3) | 29 47 | 786 | 11 | 15 | 53 | 44 |
| 1611 | Tu. | 4712 | 1533 | 1018 | Th. 28 | B. | (4) | 45 18 | 787 | 11 | 16 | 54 | 45 |
| B.1612 | We. | 4713 | 1534 | 1019 | Sa. 28 | | (6) | 0 50 | 788 | 10 | 17 | 55 | 46 |
| 1613 | Fr. | 4714 | 1535 | 1020 | Su. 28 | | (0) | 16 21 | 789 | 11 | 18 | 56 | 47 |
| 1614 | Sa. | 4715 | 1536 | 1021 | Mo 28 | | (1) | 31 52 | 790 | 11 | 19 | 57 | 48 |
| 1615 | Su. | 4716 | 1537 | 1022 | Tu. 28 | B. | (2) | 47 23 | 791 | 11 | 20 | 58 | 49 |
| B.1616 | Mo. | 4717 | 1538 | 1023 | Th. 28 | | (4) | 2 55 | 792 | 10 | 21 | 59 | 50 |
| 1617 | We. | 4718 | 1539 | 1024 | Fr. 28 | | (5) | 18 26 | 793 | 11 | 22 | 60 | 51 |
| 1618 | Th. | 4719 | 1540 | 1025 | Sa. 28 | | (6) | 33 57 | 794 | 11 | 23 | 1 | 52 |
| 1619 | Fr. | 4720 | 1541 | 1026 | Su. 28 | B. | (0) | 49 28 | 795 | 11 | 24 | 2 | 53 |
| B.1620 | Sa. | 4721 | 1542 | 1027 | Tu. 28 | | (2) | 5 0 | 796 | 11 | 25 | 3 | 54 |
| 1621 | Mo. | 4722 | 1543 | 1028 | We. 28 | | (3) | 20 31 | 797 | 11 | 26 | 4 | 55 |
| 1622 | Tu. | 4723 | 1544 | 1029 | Th. 28 | | (4) | 36 2 | 798 | 11 | 27 | 5 | 56 |
| 1623 | We. | 4724 | 1545 | 1030 | Fr. 28 | B. | (5) | 51 33 | 799 | 11 | 28 | 6 | 57 |
| B.1624 | Th. | 4725 | 1546 | 1031 | Su. 28 | | (0) | 7 5 | 800 | 11 | 29 | 7 | 58 |
| 1625 | Sa. | 4726 | 1547 | 1032 | Mo. 28 | | (1) | 22 36 | 801 | 11 | 30 | 8 | 59 |
| 1626 | Su. | 4727 | 1548 | 1033 | Tu. 28 | | (2) | 38 7 | 802 | 11 | 31 | 9 | 60 |
| 1627 | Mo. | 4728 | 1549 | 1034 | We. 28 | B. | (3) | 53 38 | 803 | 11 | 32 | 10 | 1 |
| B.1628 | Tu. | 4729 | 1550 | 1035 | Fr. 28 | | (5) | 9 10 | 804 | 11 | 33 | 11 | 2 |
| 1629 | Th. | 4730 | 1551 | 1036 | Sa. 28 | | (6) | 24 41 | 805 | 11 | 34 | 12 | 3 |
| 1630 | Fr. | 4731 | 1552 | 1037 | Su. 28 | | (0) | 40 12 | 806 | 11 | 35 | 13 | 4 |
| 1631 | Sa. | 4732 | 1553 | 1038 | Mo. 28 | B. | (1) | 55 43 | 807 | 11 | 36 | 14 | 5 |
| B.1632 | Su. | 4733 | 1554 | 1039 | We. 28 | | (3) | 11 15 | 808 | 11 | 37 | 15 | 6 |
| 1633 | Tu. | 4734 | 1555 | 1040 | Th. 28 | | (4) | 26 46 | 809 | 11 | 38 | 16 | 7 |
| 1634 | We. | 4735 | 1556 | 1041 | Fr. 28 | | (5) | 42 17 | 810 | 11 | 39 | 17 | 8 |
| 1635 | Th. | 4736 | 1557 | 1042 | Sa. 28 | B. | (6) | 57 48 | 811 | 11 | 40 | 18 | 9 |
| B.1636 | Fr. | 4737 | 1558 | 1043 | Mo. 28 | | (1) | 13 20 | 812 | 11 | 41 | 19 | 10 |
| 1637 | Su. | 4738 | 1559 | 1044 | Tu. 28 | | (2) | 28 51 | 813 | 11 | 42 | 20 | 11 |
| 1638 | Mo. | 4739 | 1560 | 1045 | We. 28 | | (3) | 44 22 | 814 | 11 | 43 | 21 | 12 |
| 1639 | Tu. | 4740 | 1561 | 1046 | Th. 28 | B. | (4) | 59 53 | 815 | 11 | 44 | 22 | 13 |
| B.1640 | We. | 4741 | 1562 | 1047 | Sa. 28 | | (6) | 15 25 | 816 | 11 | 45 | 23 | 14 |
| 1641 | Fr. | 4742 | 1563 | 1048 | Su. 28 | | (0) | 30 56 | 817 | 11 | 46 | 24 | 15 |
| 1642 | Sa. | 4743 | 1564 | 1049 | Mo. 28 | B. | (1) | 46 27 | 818 | 11 | 47 | 25 | 16 |
| 1643 | Su. | 4744 | 1565 | 1050 | We. 29 | | (3) | 1 58 | 819 | 11 | 48 | 26 | 17 |
| B.1644 | Mo. | 4745 | 1566 | 1051 | Th. 28 | | (4) | 17 30 | 820 | 11 | 49 | 27 | 18 |
| 1645 | We. | 4746 | 1567 | 1052 | Fr. 28 | | (5) | 33 1 | 821 | 11 | 50 | 28 | 19 |
| 1646 | Th. | 4747 | 1568 | 1053 | Sa. 28 | B. | (6) | 48 32 | 822 | 11 | 51 | 29 | 20 |
| 1647 | Fr. | 4748 | 1569 | 1054 | Mo. 29 | | (1) | 4 3 | 823 | 12 | 52 | 30 | 21 |
| B.1648 | Sa. | 4749 | 1570 | 1055 | Tu. 28 | | (2) | 19 35 | 824 | 11 | 53 | 31 | 22 |
| 1649 | Mo. | 4750 | 1571 | 1056 | We. 28 | | (3) | 35 6 | 825 | 11 | 54 | 32 | 23 |

* The Fasli year of Southern India is two years in advance of the Bengāli san; it begins on the 10-16 July, and is now fixed to the latter day. (The table shows the correspondence of Hindū eras with European dates.)

| Solar Year. | | PART I.—HINDU SIDEREAL YEARS. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| I. | II. | III. | IV. | V. | VI. | VII. | | | VIII. | IX. | X. | XI. |
| Christian Year. A. D. | First day of ditto. | Years beginning on entrance of the Sun into Aries of the Sidereal Zodiac. | | | | Character of the year. | First weekly day of ditto. | Indian hour and minute of Sankránta, or ☉ enters ♈ constellation. | Cycles. | | | |
| | | Kali-yug. | Śáka. | Bengáli San. | Initial date of all three in March O.S. | | | D. G. P. | Cycle of 1000 years of Parasuráma, beginning in September. | Initial date in September. | Cycle of Grahaparivṛithi. | Cycle of Vṛihaspati, (Bengal account). | Do. (Tamul account.) |
| 1650 | Tu. | 4751 | 1572 | 1057 | Th. 28 | B. | (4) | 50 37 | 826 | 11 | 55 | 33 | 24 |
| 1651 | We. | 4752 | 1573 | 1058 | Sa. 29 | | (6) | 6 8 | 827 | 12 | 56 | 34 | 25 |
| B.1652 | Th. | 4753 | 1574 | 1059 | Su. 28 | | (0) | 21 40 | 828 | 11 | 57 | 35 | 26 |
| 1653 | Sa. | 4754 | 1575 | 1060 | Mo. 28 | | (1) | 37 11 | 829 | 11 | 58 | 36 | 27 |
| 1654 | Su. | 4755 | 1576 | 1061 | Tu. 28 | B. | (2) | 52 42 | 830 | 11 | 59 | 37 | 28 |
| 1655 | Mo. | 4756 | 1577 | 1062 | Th. 29 | | (4) | 8 13 | 831 | 12 | 60 | 38 | 29 |
| B.1656 | Tu. | 4757 | 1578 | 1063 | Fr. 28 | | (5) | 23 45 | 832 | 11 | 61 | 39 | 30 |
| 1657 | Th. | 4758 | 1579 | 1064 | Sa. 28 | | (6) | 39 16 | 833 | 11 | 62 | 40 | 31 |
| 1658 | Fr. | 4759 | 1580 | 1065 | Su. 28 | B. | (0) | 54 47 | 834 | 11 | 63 | 41 | 32 |
| 1659 | Sa. | 4760 | 1581 | 1066 | Tu. 29 | | (2) | 10 18 | 835 | 12 | 64 | 42 | 33 |
| B.1660 | Su. | 4761 | 1582 | 1067 | We. 28 | | (3) | 25 50 | 836 | 11 | 65 | 43 | 34 |
| 1661 | Tu. | 4762 | 1583 | 1068 | Th. 28 | | (4) | 41 21 | 837 | 11 | 66 | 44 | 35 |
| 1662 | We. | 4763 | 1584 | 1069 | Fr. 28 | B. | (5) | 56 52 | 838 | 11 | 67 | 45 | 36 |
| 1663 | Th. | 4764 | 1585 | 1070 | Su. 29 | | (0) | 12 23 | 839 | 12 | 68 | 46 | 37 |
| B.1664 | Fr. | 4765 | 1586 | 1071 | Mo. 28 | | (1) | 27 55 | 840 | 11 | 69 | 47 | 38 |
| 1665 | Su. | 4766 | 1587 | 1072 | Tu. 28 | | (2) | 43 26 | 841 | 11 | 70 | 48 | 39 |
| 1666 | Mo. | 4767 | 1588 | 1073 | We. 28 | B. | (3) | 58 57 | 842 | 11 | 71 | 49 | 40 |
| 1667 | Tu. | 4768 | 1589 | 1074 | Fr. 29 | | (5) | 14 28 | 843 | 12 | 72 | 50 | 41 |
| B.1668 | We. | 4769 | 1590 | 1075 | Sa. 28 | | (6) | 30 0 | 844 | 11 | 73 | 51 | 42 |
| 1669 | Fr. | 4770 | 1591 | 1076 | Su. 28 | B. | (0) | 45 31 | 845 | 11 | 74 | 52 | 43 |
| 1670 | Sa. | 4771 | 1592 | 1077 | Tu. 29 | | (2) | 1 2 | 846 | 11 | 75 | 53 | 44 |
| 1671 | Su. | 4772 | 1593 | 1078 | We. 29 | | (3) | 16 33 | 847 | 12 | 76 | 54 | 45 |
| B.1672 | Mo. | 4773 | 1594 | 1079 | Th. 28 | | (4) | 32 5 | 848 | 11 | 77 | 55 | 46 |
| 1673 | We. | 4774 | 1595 | 1080 | Fr. 28 | B. | (5) | 47 36 | 849 | 11 | 78 | 56 | 47 |
| 1674 | Th. | 4775 | 1596 | 1081 | Su. 29 | | (0) | 3 7 | 850 | 11 | 79 | 57 | 48 |
| 1675 | Fr. | 4776 | 1597 | 1082 | Mo. 29 | | (1) | 18 38 | 851 | 12 | 80 | 58 | 49 |
| B.1676 | Sa. | 4777 | 1598 | 1083 | Tu. 28 | | (2) | 34 10 | 852 | 11 | 81 | 59 | 50 |
| 1677 | Mo. | 4778 | 1599 | 1084 | We. 28 | B. | (3) | 49 41 | 853 | 11 | 82 | 60 | 51 |
| 1678 | Tu. | 4779 | 1600 | 1085 | Fr. 29 | | (5) | 5 12 | 854 | 12 | 83 | 1 | 52 |
| 1679 | We. | 4780 | 1601 | 1086 | Sa. 29 | | (6) | 20 43 | 855 | 12 | 84 | 2 | 53 |
| B.1680 | Th. | 4781 | 1602 | 1087 | Su. 28 | | (0) | 36 15 | 856 | 11 | 85 | 3 | 54 |
| 1681 | Sa. | 4782 | 1603 | 1088 | Mo. 28 | B. | (1) | 51 46 | 857 | 11 | 86 | 4 | 55 |
| 1682 | Su. | 4783 | 1604 | 1089 | We. 29 | | (3) | 7 17 | 858 | 12 | 87 | 5 | 56 |
| 1683 | Mo. | 4784 | 1605 | 1090 | Th. 29 | | (4) | 22 48 | 859 | 12 | 88 | 6 | 57 |
| B.1684 | Tu. | 4785 | 1606 | 1091 | Fr. 28 | | (5) | 38 20 | 860 | 11 | 89 | 7-8 | 58 |
| 1685 | Th. | 4786 | 1607 | 1092 | Sa. 28 | B. | (6) | 53 51 | 861 | 11 | 90 | 9 | 59 |
| 1686 | Fr. | 4787 | 1608 | 1093 | Mo. 29 | | (1) | 9 22 | 862 | 12 | 1 | 10 | 60 |
| 1687 | Sa. | 4788 | 1609 | 1094 | Tu. 29 | | (2) | 24 53 | 863 | 12 | 2 | 11 | 1 |
| B.1688 | Su. | 4789 | 1610 | 1095 | We. 28 | | (3) | 40 25 | 864 | 11 | 3 | 12 | 2 |
| 1689 | Tu. | 4790 | 1611 | 1096 | Th. 28 | B. | (4) | 55 56 | 865 | 11 | 4 | 13 | 3 |
| 1690 | We. | 4791 | 1612 | 1097 | Sa. 29 | | (6) | 11 27 | 866 | 12 | 5 | 14 | 4 |
| 1691 | Th. | 4792 | 1613 | 1098 | Su. 29 | | (0) | 26 58 | 867 | 12 | 6 | 15 | 5 |
| B.1692 | Fr. | 4793 | 1614 | 1099 | Mo. 28 | | (1) | 42 30 | 868 | 11 | 7 | 16 | 6 |
| 1693 | Su. | 4794 | 1615 | 1100 | Tu. 28 | B. | (2) | 58 1 | 869 | 11 | 8 | 17 | 7 |
| 1694 | Mo. | 4795 | 1616 | 1101 | Th. 29 | | (4) | 13 32 | 870 | 12 | 9 | 18 | 8 |
| 1695 | Tu. | 4796 | 1617 | 1102 | Fr. 29 | | (5) | 29 3 | 871 | 12 | 10 | 19 | 9 |
| B.1696 | We. | 4797 | 1618 | 1103 | Sa. 28 | B. | (6) | 44 35 | 872 | 11 | 11 | 20 | 10 |
| 1697 | Fr. | 4798 | 1619 | 1104 | Mo. 29 | | (1) | 0 6 | 873 | 11 | 12 | 21 | 11 |
| 1698 | Sa. | 4799 | 1620 | 1105 | Tu. 29 | | (2) | 15 37 | 874 | 12 | 13 | 22 | 12 |
| 1699 | Su. | 4800 | 1621 | 1106 | We. 29 | | (3) | 31 8 | 875 | 12 | 14 | 23 | 13 |

| Solar Year. | | PART I.—HINDU SIDEREAL YEARS. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. | II. | III. | IV. | V. | VI. | VII. | | | VIII. | IX. | X. | XI. |
| Christian Year. A.D. | First day of ditto. | Years beginning on entrance of the Sun into Aries of the Sidereal Zodiac. | | | | Character of the year. | First weekly day of ditto. | Indian hour and minute of Sankránta or ☉ enters constellation ♈. | Cycles. | | | |
| | | Kali-yug. | Śáka. | Bengáli San. | Initial date of all three in March O.S. | | | | Cycle of 1000 years of Parasuráma, beginning in September. | Initial date in September. | Cycle of Grahaparivritti. | Cycle of Vrihspati, (Bengal account). | Do. (Tamul account.) |
| | | | | | | | | H. G. P. | | | | | |
| B.1700 | Mo. | 4801 | 1622 | 1107 | Th. 29 | B. | (4) | 46 40 | 876 | 12 | 15 | 24 | 14 |
| 1701 | We. | 4802 | 1623 | 1108 | Sa. 29 | | (6) | 2 11 | 877 | 12 | 16 | 25 | 15 |
| 1702 | Th. | 4803 | 1624 | 1109 | Su. 29 | | (0) | 17 42 | 878 | 13 | 17 | 26 | 16 |
| 1703 | Fr. | 4804 | 1625 | 1110 | Mo. 30 | | (1) | 13 13 | 879 | 13 | 18 | 27 | 17 |
| B.1704 | Sa. | 4805 | 1626 | 1111 | Tu. 29 | B. | (2) | 48 45 | 880 | 12 | 19 | 28 | 18 |
| 1705 | Mo. | 4806 | 1627 | 1112 | Th. 29 | | (4) | 4 16 | 881 | 12 | 20 | 29 | 19 |
| 1706 | Tu. | 4807 | 1628 | 1113 | Fr. 29 | | (5) | 19 47 | 882 | 13 | 21 | 30 | 20 |
| 1707 | We. | 4808 | 1629 | 1114 | Sa. 30 | | (6) | 35 18 | 883 | 13 | 22 | 31 | 21 |
| B.1708 | Th. | 4809 | 1630 | 1115 | Su. 29 | B. | (0) | 50 50 | 884 | 12 | 23 | 32 | 22 |
| 1709 | Sa. | 4810 | 1631 | 1116 | Tu. 29 | | (2) | 6 21 | 885 | 12 | 24 | 33 | 23 |
| 1710 | Su. | 4811 | 1632 | 1117 | We. 29 | | (3) | 21 52 | 886 | 13 | 25 | 34 | 24 |
| 1711 | Mo. | 4812 | 1633 | 1118 | Th. 30 | | (4) | 37 23 | 887 | 13 | 26 | 35 | 25 |
| B.1712 | Tu. | 4813 | 1634 | 1119 | Fr. 29 | B. | (5) | 52 55 | 888 | 12 | 27 | 36 | 26 |
| 1713 | Th. | 4814 | 1635 | 1120 | Su. 29 | | (0) | 8 26 | 889 | 13 | 28 | 37 | 27 |
| 1714 | Fr. | 4815 | 1636 | 1121 | Mo. 29 | | (1) | 23 57 | 890 | 13 | 29 | 38 | 28 |
| 1715 | Sa. | 4816 | 1637 | 1122 | Tu. 30 | | (2) | 39 28 | 891 | 13 | 30 | 39 | 29 |
| B.1716 | Su. | 4817 | 1638 | 1123 | We. 29 | B. | (3) | 55 0 | 892 | 12 | 31 | 40 | 30 |
| 1717 | Tu. | 4818 | 1639 | 1124 | Fr. 29 | | (5) | 10 31 | 893 | 13 | 32 | 41 | 31 |
| 1718 | We. | 4819 | 1640 | 1125 | Sa. 29 | | (6) | 26 2 | 894 | 13 | 33 | 42 | 32 |
| 1719 | Th. | 4820 | 1641 | 1126 | Su. 30 | | (0) | 41 33 | 895 | 13 | 34 | 43 | 33 |
| B.1720 | Fr. | 4821 | 1642 | 1127 | Mo. 29 | B. | (1) | 57 5 | 896 | 12 | 35 | 44 | 34 |
| 1721 | Su. | 4822 | 1643 | 1128 | We. 29 | | (3) | 12 36 | 897 | 13 | 36 | 45 | 35 |
| 1722 | Mo. | 4823 | 1644 | 1129 | Th. 29 | | (4) | 28 7 | 898 | 13 | 37 | 46 | 36 |
| 1723 | Tu. | 4824 | 1645 | 1130 | Fr. 30 | | (5) | 43 38 | 899 | 13 | 38 | 47 | 37 |
| B.1724 | We. | 4825 | 1646 | 1131 | Sa. 29 | B. | (6) | 59 10 | 900 | 12 | 39 | 48 | 38 |
| 1725 | Fr. | 4826 | 1647 | 1132 | Mo. 29 | | (1) | 14 41 | 901 | 13 | 40 | 49 | 39 |
| 1726 | Sa. | 4827 | 1648 | 1133 | Tu. 30 | | (2) | 30 12 | 902 | 13 | 41 | 50 | 40 |
| 1727 | Su. | 4828 | 1649 | 1134 | We. 30 | B. | (3) | 45 43 | 903 | 13 | 42 | 51 | 41 |
| B.1728 | Mo. | 4829 | 1650 | 1135 | Fr. 29 | | (5) | 1 15 | 904 | 12 | 43 | 52 | 42 |
| 1729 | We. | 4830 | 1651 | 1136 | Sa. 29 | | (6) | 16 46 | 905 | 13 | 44 | 53 | 43 |
| 1730 | Th. | 4831 | 1652 | 1137 | Su. 30 | | (0) | 32 17 | 906 | 13 | 45 | 54 | 44 |
| 1731 | Fr. | 4832 | 1653 | 1138 | Mo. 30 | B. | (1) | 47 48 | 907 | 13 | 46 | 55 | 45 |
| B.1732 | Sa. | 4833 | 1654 | 1139 | We. 29 | | (3) | 3 20 | 908 | 13 | 47 | 56 | 46 |
| 1733 | Mo. | 4834 | 1655 | 1140 | Th. 29 | | (4) | 18 51 | 909 | 13 | 48 | 57 | 47 |
| 1734 | Tu. | 4835 | 1656 | 1141 | Fr. 30 | | (5) | 34 22 | 910 | 13 | 49 | 58 | 48 |
| 1735 | We. | 4836 | 1657 | 1142 | Sa. 30 | B. | (6) | 49 53 | 911 | 13 | 50 | 59 | 49 |
| B.1736 | Th. | 4837 | 1658 | 1143 | Mo. 29 | | (1) | 5 25 | 912 | 13 | 51 | 60 | 50 |
| 1737 | Sa. | 4838 | 1659 | 1144 | Tu. 29 | | (2) | 20 56 | 913 | 13 | 52 | 1 | 51 |
| 1738 | Su. | 4839 | 1660 | 1145 | We. 30 | | (3) | 36 27 | 914 | 13 | 53 | 2 | 52 |
| 1739 | Mo. | 4840 | 1661 | 1146 | Th. 30 | B. | (4) | 51 58 | 915 | 13 | 54 | 3 | 53 |
| B.1740 | Tu. | 4841 | 1662 | 1147 | Sa. 30 | | (6) | 7 30 | 916 | 13 | 55 | 4 | 54 |
| 1741 | Th. | 4842 | 1663 | 1148 | Su. 29 | | (0) | 23 1 | 917 | 13 | 56 | 5 | 55 |
| 1742 | Fr. | 4843 | 1664 | 1149 | Mo. 29 | | (1) | 38 32 | 918 | 13 | 57 | 6 | 56 |
| 1743 | Sa. | 4844 | 1665 | 1150 | Tu. 29 | B. | (2) | 54 3 | 919 | 13 | 58 | 7 | 57 |
| B.1744 | Su. | 4845 | 1666 | 1151 | Th. 30 | | (4) | 9 35 | 920 | 13 | 59 | 8 | 58 |
| 1745 | Tu. | 4846 | 1667 | 1152 | Fr. 30 | | (5) | 25 6 | 921 | 13 | 60 | 9 | 59 |
| 1746 | We. | 4847 | 1668 | 1153 | Sa. 29 | | (6) | 40 37 | 922 | 13 | 61 | 10 | 60 |
| 1747 | Th. | 4848 | 1669 | 1154 | Su. 29 | B. | (0) | 56 8 | 923 | 13 | 62 | 11 | 1 |
| B.1748 | Fr. | 4849 | 1670 | 1155 | Tu. 30 | | (2) | 11 40 | 924 | 13 | 63 | 12 | 2 |
| 1749 | Su. | 4850 | 1671 | 1156 | We. 29 | | (3) | 27 11 | 925 | 13 | 64 | 13 | 3 |

| Solar Year. | | PART I.—HINDU SIDEREAL YEARS. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. | II. | III. | IV. | V. | VI. | VII. | | | VIII. | IX. | X. | XI. |
| Christian Year. A. D. | First day of ditto. | Years beginning on entrance of the Sun into Aries of the Sidereal Zodiac. Kali-yug. | Śáka. | Bengali San. | Initial date of all three in April N. S. | Character of the year. | First weekly day of ditto. | Indian hour and minute of Sankránta, or ☉ enters constellation ♈. D. G. P. | Cycles. Cycle of 1000 years of Parasuráma, beginning in September. | Initial date in September. | Cycle of Grahaparivrithi. | Cycle of Vrihspati, (Bengal account). | Do. (Tamul account). |
| 1750 | Mo. | 4851 | 1672 | 1157 | Th. 29 | | (4) | 42 42 | 926 | 13 | 65 | 14 | 4 |
| 1751 | Tu. | 4852 | 1673 | 1158 | Fr. 9 | B. | (5) | 58 13 | 927 | 13 | 66 | 15 | 5 |
| B.1752 | We. | 4853 | 1674 | 1159 | Su. 9 | | (0) | 13 45 | 928 | 13 | 67 | 16 | 6 |
| 1753 | Fr. | 4854 | 1675 | 1160 | Mo. 9 | | (1) | 29 16 | 929 | 13 | 68 | 17 | 7 |
| 1754 | Sa. | 4855 | 1676 | 1161 | Tu. 9 | B. | (2) | 44 47 | 930 | 13 | 69 | 18 | 8 |
| 1755 | Su. | 4856 | 1677 | 1162 | Th. 10 | | (4) | 0 18 | 931 | 13 | 70 | 19 | 9 |
| B.1756 | Mo. | 4857 | 1678 | 1163 | Fr. 9 | | (5) | 15 50 | 932 | 13 | 71 | 20 | 10 |
| 1757 | We. | 4858 | 1679 | 1164 | Sa. 9 | | (6) | 31 21 | 933 | 13 | 72 | 21 | 11 |
| 1758 | Th. | 4859 | 1680 | 1165 | Su. 9 | B. | (0) | 46 52 | 934 | 13 | 73 | 22 | 12 |
| 1759 | Fr. | 4860 | 1681 | 1166 | Tu. 10 | | (2) | 2 23 | 935 | 13 | 74 | 23 | 13 |
| B.1760 | Sa. | 4861 | 1682 | 1167 | We. 9 | | (3) | 17 35 | 936 | 13 | 75 | 24 | 14 |
| 1761 | Mo. | 4862 | 1683 | 1168 | Th. 9 | | (1) | 33 26 | 937 | 13 | 76 | 25 | 15 |
| 1762 | Tu. | 4863 | 1684 | 1169 | Fr. 9 | B. | (5) | 48 57 | 938 | 13 | 77 | 26 | 16 |
| 1763 | We. | 4864 | 1685 | 1170 | Su. 10 | | (0) | 4 28 | 939 | 14 | 78 | 27 | 17 |
| B.1764 | Th. | 4865 | 1686 | 1171 | Mo. 9 | | (1) | 20 0 | 940 | 13 | 79 | 28 | 18 |
| 1765 | Sa. | 4866 | 1687 | 1172 | Tu. 9 | | (2) | 35 31 | 941 | 13 | 80 | 29 | 19 |
| 1766 | Su. | 4867 | 1688 | 1173 | We. 9 | B. | (3) | 51 2 | 942 | 13 | 81 | 30 | 20 |
| 1767 | Mo. | 4868 | 1689 | 1174 | Fr. 10 | | (5) | 6 33 | 943 | 14 | 82 | 31 | 21 |
| B.1768 | Tu. | 4869 | 1690 | 1175 | Sa. 9 | | (6) | 22 5 | 944 | 13 | 83 | 32 | 22 |
| 1769 | Th. | 4870 | 1691 | 1176 | Su. 9 | | (0) | 37 36 | 945 | 13 | 84 | 33 | 23 |
| 1770 | Fr. | 4871 | 1692 | 1177 | Mo. 9 | B. | (1) | 53 7 | 946 | 13 | 85 | 34-5 | 24 |
| 1771 | Sa. | 4872 | 1693 | 1178 | We. 10 | | (3) | 8 38 | 947 | 14 | 86 | 36 | 25 |
| B.1772 | Su. | 4873 | 1694 | 1179 | Th. 9 | | (4) | 24 10 | 948 | 13 | 87 | 37 | 26 |
| 1773 | Tu. | 4874 | 1695 | 1180 | Fr. 9 | | (5) | 39 41 | 949 | 13 | 88 | 38 | 27 |
| 1774 | We. | 4875 | 1696 | 1181 | Sa. 9 | B. | (6) | 55 12 | 950 | 13 | 89 | 39 | 28 |
| 1775 | Th. | 4876 | 1697 | 1182 | Mo. 10 | | (1) | 10 43 | 951 | 14 | 90 | 40 | 29 |
| B.1776 | Fr. | 4877 | 1698 | 1183 | Tu. 9 | | (2) | 26 15 | 952 | 13 | 1 | 41 | 30 |
| 1777 | Su. | 4878 | 1699 | 1184 | We. 9 | | (3) | 41 46 | 953 | 13 | 2 | 42 | 31 |
| 1778 | Mo. | 4879 | 1700 | 1185 | Th. 9 | B. | (4) | 57 17 | 954 | 13 | 3 | 43 | 32 |
| 1779 | Tu. | 4880 | 1701 | 1186 | Sa. 10 | | (6) | 12 48 | 955 | 14 | 4 | 44 | 33 |
| B.1780 | We. | 4881 | 1702 | 1187 | Su. 9 | | (0) | 28 20 | 956 | 13 | 5 | 45 | 34 |
| 1781 | Fr. | 4882 | 1703 | 1188 | Mo. 9 | | (1) | 43 51 | 957 | 13 | 6 | 46 | 35 |
| 1782 | Sa. | 4883 | 1704 | 1189 | Tu. 9 | B. | (2) | 59 22 | 958 | 13 | 7 | 47 | 36 |
| 1783 | Su. | 4884 | 1705 | 1190 | Th. 10 | | (4) | 14 53 | 959 | 14 | 8 | 48 | 37 |
| B.1784 | Mo. | 4885 | 1706 | 1191 | Fr. 9 | | (5) | 30 25 | 960 | 13 | 9 | 49 | 38 |
| 1785 | We. | 4886 | 1707 | 1192 | Sa. 9 | B. | (6) | 45 56 | 961 | 13 | 10 | 50 | 39 |
| 1786 | Th. | 4887 | 1708 | 1193 | Mo. 10 | | (1) | 1 27 | 962 | 13 | 11 | 51 | 40 |
| 1787 | Fr. | 4888 | 1709 | 1194 | Tu. 10 | | (2) | 16 58 | 963 | 14 | 12 | 52 | 41 |
| B.1788 | Sa. | 4889 | 1710 | 1195 | We. 9 | | (3) | 32 30 | 964 | 13 | 13 | 53 | 42 |
| 1789 | Mo. | 4890 | 1711 | 1196 | Th. 9 | B. | (4) | 48 1 | 965 | 13 | 14 | 54 | 43 |
| 1790 | Tu. | 4891 | 1712 | 1197 | Sa. 10 | | (6) | 3 32 | 966 | 14 | 15 | 55 | 44 |
| 1791 | We. | 4892 | 1713 | 1198 | Su. 10 | | (0) | 19 3 | 967 | 14 | 16 | 56 | 45 |
| B.1792 | Th. | 4893 | 1714 | 1199 | Mo. 9 | | (1) | 34 35 | 968 | 13 | 17 | 57 | 46 |
| 1793 | Sa. | 4894 | 1715 | 1200 | Tu. 9 | B. | (2) | 50 6 | 969 | 13 | 18 | 58 | 47 |
| 1794 | Su. | 4895 | 1716 | 1201 | Th. 10 | | (4) | 5 37 | 970 | 14 | 19 | 59 | 48 |
| 1795 | Mo. | 4896 | 1717 | 1202 | Fr. 10 | | (5) | 21 8 | 971 | 14 | 20 | 60 | 49 |
| B.1796 | Tu. | 4897 | 1718 | 1203 | Sa. 9 | | (6) | 36 40 | 972 | 13 | 21 | 1 | 50 |
| 1797 | Th. | 4898 | 1719 | 1204 | Su. 9 | B. | (0) | 52 11 | 973 | 13 | 22 | 2 | 51 |
| 1798 | Fr. | 4899 | 1720 | 1205 | Tu. 10 | | (2) | 7 42 | 974 | 14 | 23 | 3 | 52 |
| 1799 | Sa. | 4900 | 1721 | 1206 | We. 10 | | (3) | 23 13 | 975 | 14 | 24 | 4 | 53 |

| Solar Year. | | PART I.—HINDU SIDEREAL YEARS. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. | II. | III. | IV. | V. | VI. | VII. | | | VIII. | | IX. | X. | XI. |
| Christian Year. A. D. | First day of ditto. | Years beginning on entrance of the Sun into Aries of the Sidereal Zodiac. | | | | Character of the year. | First weekly day of ditto. | Indian hour and minute of Sankránta, or ☉ enters constellation ♈. | Cycles. | | | | |
| | | Kali-yug. | Saka. | Bengáli San. | Initial date of all three in April N. S. | | | D. G. P. | Cycle of 1000 years of Parasuráma, beginning in September. | Initial date in September. | Cycle of Grahapari-vritti. | Cycle of Vrihspati. (Bengal account.) | Do. (Tamul account.) |
| B.1800 | Su. | 4901 | 1722 | 1207 | Th. 10 | | (4) | 38 45 | 976 | 14 | 25 | 5 | 54 |
| 1801 | Tu. | 4902 | 1723 | 1208 | Fr. 10 | B. | (5) | 54 16 | 977 | 14 | 26 | 6 | 55 |
| 1802 | We. | 4903 | 1724 | 1209 | Su. 11 | | (0) | 9 47 | 978 | 15 | 27 | 7 | 56 |
| 1803 | Th. | 4904 | 1725 | 1210 | Mo. 11 | | (1) | 25 18 | 979 | 15 | 28 | 8 | 57 |
| B.1804 | Fr. | 4905 | 1726 | 1211 | Tu. 10 | | (2) | 40 50 | 980 | 14 | 29 | 9 | 58 |
| 1805 | Su. | 4906 | 1727 | 1212 | We. 10 | B. | (3) | 56 21 | 981 | 14 | 30 | 10 | 59 |
| 1806 | Mo. | 4907 | 1728 | 1213 | Fr. 11 | | (5) | 11 52 | 982 | 15 | 31 | 11 | 60 |
| 1807 | Tu. | 4908 | 1729 | 1214 | Sa. 11 | | (6) | 27 23 | 983 | 15 | 32 | 12 | 1 |
| B.1808 | We. | 4909 | 1730 | 1215 | Su. 10 | | (0) | 42 55 | 984 | 14 | 33 | 13 | 2 |
| 1809 | Fr. | 4910 | 1731 | 1216 | Mo. 10 | B. | (1) | 58 26 | 985 | 14 | 34 | 14 | 3 |
| 1810 | Sa. | 4911 | 1732 | 1217 | We. 11 | | (3) | 13 57 | 986 | 15 | 35 | 15 | 4 |
| 1811 | Su. | 4912 | 1733 | 1218 | Th. 11 | | (4) | 29 28 | 987 | 15 | 36 | 16 | 5 |
| B.1812 | Mo. | 4913 | 1734 | 1219 | Fr. 10 | B. | (5) | 45 0 | 988 | 14 | 37 | 17 | 6 |
| 1813 | We. | 4914 | 1735 | 1220 | Su. 11 | | (0) | 0 31 | 989 | 14 | 38 | 18 | 7 |
| 1814 | Th. | 4915 | 1736 | 1221 | Mo. 11 | | (1) | 16 2 | 990 | 15 | 39 | 19 | 8 |
| 1815 | Fr. | 4916 | 1737 | 1222 | Tu. 11 | | (2) | 31 33 | 991 | 15 | 40 | 20 | 9 |
| B.1816 | Sa. | 4917 | 1738 | 1223 | We. 10 | B. | (3) | 47 5 | 992 | 14 | 41 | 21 | 10 |
| 1817 | Mo. | 4918 | 1739 | 1224 | Fr. 11 | | (5) | 2 36 | 993 | 14 | 42 | 22 | 11 |
| 1818 | Tu. | 4919 | 1740 | 1225 | Sa. 11 | | (6) | 18 7 | 994 | 15 | 43 | 23 | 12 |
| 1819 | We. | 4920 | 1741 | 1226 | Su. 11 | | (0) | 33 38 | 995 | 15 | 44 | 24 | 13 |
| B.1820 | Th. | 4921 | 1742 | 1227 | Mo. 10 | B. | (1) | 49 10 | 996 | 14 | 45 | 25 | 14 |
| 1821 | Sa. | 4922 | 1743 | 1228 | We. 11 | | (3) | 4 41 | 997 | 15 | 46 | 26 | 15 |
| 1822 | Su. | 4923 | 1744 | 1229 | Th. 11 | | (4) | 20 12 | 998 | 15 | 47 | 27 | 16 |
| 1823 | Mo. | 4924 | 1745 | 1230 | Fr. 11 | | (5) | 35 43 | 999 | 15 | 48 | 28 | 17 |
| B.1824 | Tu. | 4925 | 1746 | 1231 | Sa. 10 | B. | (6) | 51 15 | 1000 | 14 | 49 | 29 | 18 |
| 1825 | Th. | 4926 | 1747 | 1232 | Mo. 11 | | (1) | 6 46 | 1 | 15 | 50 | 30 | 19 |
| 1826 | Fr. | 4927 | 1748 | 1233 | Tu. 11 | | (2) | 22 17 | 2 | 15 | 51 | 31 | 20 |
| 1827 | Sa. | 4928 | 1749 | 1234 | We. 11 | | (3) | 37 48 | 3 | 15 | 52 | 32 | 21 |
| B.1828 | Su. | 4929 | 1750 | 1235 | Th. 10 | B. | (4) | 53 20 | 4 | 14 | 53 | 33 | 22 |
| 1829 | Tu. | 4930 | 1751 | 1236 | Sa. 11 | | (6) | 8 51 | 5 | 15 | 54 | 34 | 23 |
| 1830 | We. | 4931 | 1752 | 1237 | Su. 11 | | (0) | 24 22 | 6 | 15 | 55 | 35 | 24 |
| 1831 | Th. | 4932 | 1753 | 1238 | Mo. 11 | | (1) | 39 53 | 7 | 15 | 56 | 36 | 25 |
| B.1832 | Fr. | 4933 | 1754 | 1239 | Tu. 10 | B. | (2) | 55 25 | 8 | 14 | 57 | 37 | 26 |
| 1833 | Su. | 4934 | 1755 | 1240 | Th. 11 | | (4) | 10 56 | 9 | 15 | 58 | 38 | 27 |
| 1834 | Mo. | 4935 | 1756 | 1241 | Fr. 11 | | (5) | 26 27 | 10 | 15 | 59 | 39 | 28 |
| 1835 | Tu. | 4936 | 1757 | 1242 | Sa. 11 | | (6) | 41 58 | 11 | 15 | 60 | 40 | 29 |
| B.1836 | We. | 4937 | 1758 | 1243 | Su. 10 | B. | (0) | 57 30 | 12 | 14 | 61 | 41 | 30 |
| 1837 | Fr. | 4938 | 1759 | 1244 | Tu. 11 | | (2) | 13 1 | 13 | 15 | 62 | 42 | 31 |
| 1838 | Sa. | 4939 | 1760 | 1245 | We. 11 | | (3) | 28 32 | 14 | 15 | 63 | 43 | 32 |
| 1839 | Su. | 4940 | 1761 | 1246 | Th. 11 | | (4) | 44 3 | 15 | 15 | 64 | 44 | 33 |
| B.1840 | Mo. | 4941 | 1762 | 1247 | Fr. 10 | B. | (5) | 59 35 | 16 | 14 | 65 | 45 | 34 |
| 1841 | We. | 4942 | 1763 | 1248 | Su. 11 | | (0) | 15 6 | 17 | 15 | 66 | 46 | 35 |
| 1842 | Th. | 4943 | 1764 | 1249 | Mo. 11 | | (1) | 30 37 | 18 | 15 | 67 | 47 | 36 |
| 1843 | Fr. | 4944 | 1765 | 1250 | Tu. 11 | B. | (2) | 46 8 | 19 | 15 | 68 | 48 | 37 |
| B.1844 | Sa. | 4945 | 1766 | 1251 | Th. 11 | | (4) | 1 40 | 20 | 14 | 69 | 49 | 38 |
| 1845 | Mo. | 4946 | 1767 | 1252 | Fr. 11 | | (5) | 47 14 | 21 | 15 | 70 | 50 | 39 |
| 1846 | Tu. | 4947 | 1768 | 1253 | Sa. 11 | | (6) | 32 42 | 22 | 15 | 71 | 51 | 40 |
| 1847 | We. | 4948 | 1769 | 1254 | Su. 11 | B. | (0) | 48 13 | 23 | 15 | 72 | 52 | 41 |
| B.1848 | Th. | 4949 | 1770 | 1255 | Tu. 11 | | (2) | 3 45 | 24 | 15 | 73 | 53 | 42 |
| 1849 | Sa. | 4950 | 1771 | 1256 | We. 11 | | (3) | 19 16 | 25 | 15 | 74 | 54 | 43 |

| Solar Year. | | Part I.—Hindu Sidereal Years. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I. | II. | III. | IV. | V. | VI. | VII. | | | VIII. | IX. | X. | XI. |
| Christian Year. A. D. | First day of ditto. | Years beginning on entrance of the Sun into Aries of the Sidereal Zodiac. Kali-yug. | Śáka. | Bengáli San. | Initial date of all three in April N.S. | Character of the year. | First weekly day of ditto. | Indian hour and minute of Sankránta, or ☉ enters constellation ♈. D. G. P. | Cycles. Cycle of 1000 years of Paraśuráma, beginning in September. | Initial date in September. | Cycle of Grahaparivṛithi. | Cycle of Vṛihspati, (Bengal account.) | Do. (Tamul account.) |
| 1850 | Su. | 4951 | 1772 | 1257 | Th. 11 | | (4) | 34 47 | 26 | 15 | 75 | 55 | 44 |
| 1851 | Mo. | 4952 | 1773 | 1258 | Fr. 11 | B. | (5) | 50 18 | 27 | 15 | 76 | 56 | 45 |
| B.1852 | Tu. | 4953 | 1774 | 1259 | Su. 11 | | (0) | 5 50 | 28 | 15 | 77 | 57 | 46 |
| 1853 | Th. | 4954 | 1775 | 1260 | Mo. 11 | | (1) | 21 21 | 29 | 15 | 78 | 58 | 47 |
| 1854 | Fr. | 4955 | 1776 | 1261 | Tu. 11 | | (2) | 36 52 | 30 | 15 | 79 | 59 | 48 |
| 1855 | Sa. | 4956 | 1777 | 1262 | We. 11 | B. | (3) | 52 23 | 31 | 15 | 80 | 60 | 49 |
| B.1856 | Su. | 4957 | 1778 | 1263 | Fr. 11 | | (5) | 7 55 | 32 | 15 | 81 | 1-2 | 50 |
| 1857 | Tu. | 4958 | 1779 | 1264 | Sa. 11 | | (6) | 23 26 | 33 | 15 | 82 | 3 | 51 |
| 1858 | We. | 4959 | 1780 | 1265 | Su. 11 | | (0) | 38 57 | 34 | 15 | 83 | 4 | 52 |
| 1859 | Th. | 4960 | 1781 | 1266 | Mo. 11 | B. | (1) | 54 28 | 35 | 15 | 84 | 5 | 53 |
| B.1860 | Fr. | 4961 | 1782 | 1267 | We. 11 | | (3) | 10 0 | 36 | 15 | 85 | 6 | 54 |
| 1861 | Su. | 4962 | 1783 | 1268 | Th. 11 | | (4) | 25 31 | 37 | 15 | 86 | 7 | 55 |
| 1862 | Mo. | 4963 | 1784 | 1269 | Fr. 11 | | (5) | 41 2 | 38 | 15 | 87 | 8 | 56 |
| 1863 | Tu. | 4964 | 1785 | 1270 | Sa. 11 | B. | (6) | 56 33 | 39 | 15 | 88 | 9 | 57 |
| B.1864 | We. | 4965 | 1786 | 1271 | Mo. 11 | | (1) | 12 5 | 40 | 15 | 89 | 10 | 58 |
| 1865 | Fr. | 4966 | 1787 | 1272 | Tu. 11 | | (2) | 27 36 | 41 | 15 | 90 | 11 | 59 |
| 1866 | Sa. | 4967 | 1788 | 1273 | We. 11 | | (3) | 43 7 | 42 | 15 | 1 | 12 | 60 |
| 1867 | Su. | 4968 | 1789 | 1274 | Th. 11 | B. | (4) | 58 38 | 43 | 15 | 2 | 13 | 1 |
| B.1868 | Mo. | 4969 | 1790 | 1275 | Sa. 11 | | (6) | 14 10 | 44 | 15 | 3 | 14 | 2 |
| 1869 | We. | 4970 | 1791 | 1276 | Su. 11 | | (0) | 29 41 | 45 | 15 | 4 | 15 | 3 |
| 1870 | Th. | 4971 | 1792 | 1277 | Mo. 11 | B. | (1) | 45 12 | 46 | 15 | 5 | 16 | 4 |
| 1871 | Fr. | 4972 | 1793 | 1278 | We. 12 | | (3) | 0 43 | 47 | 15 | 6 | 17 | 5 |
| B.1872 | Sa. | 4973 | 1794 | 1279 | Th. 11 | | (4) | 16 15 | 48 | 15 | 7 | 18 | 6 |
| 1873 | Mo. | 4974 | 1795 | 1280 | Fr. 11 | | (5) | 31 46 | 49 | 15 | 8 | 19 | 7 |
| 1874 | Tu. | 4975 | 1796 | 1281 | Sa. 11 | B. | (6) | 47 17 | 50 | 15 | 9 | 20 | 8 |
| 1875 | We. | 4976 | 1797 | 1282 | Mo. 12 | | (1) | 2 48 | 51 | 15 | 10 | 21 | 9 |
| B.1876 | Th. | 4977 | 1798 | 1283 | Tu. 11 | | (2) | 18 20 | 52 | 15 | 11 | 22 | 10 |
| 1877 | Sa. | 4978 | 1799 | 1284 | We. 11 | | (3) | 33 51 | 53 | 15 | 12 | 23 | 11 |
| 1878 | Su. | 4979 | 1800 | 1285 | Th. 11 | B. | (4) | 49 22 | 54 | 15 | 13 | 24 | 12 |
| 1879 | Mo. | 4980 | 1801 | 1286 | Sa. 12 | | (6) | 4 53 | 55 | 16 | 14 | 25 | 13 |
| B.1880 | Tu. | 4981 | 1802 | 1287 | Su. 11 | | (0) | 20 25 | 56 | 15 | 15 | 26 | 14 |
| 1881 | Th. | 4982 | 1803 | 1288 | Mo. 11 | | (1) | 35 56 | 57 | 15 | 16 | 27 | 15 |
| 1882 | Fr. | 4983 | 1804 | 1289 | Tu. 11 | B. | (2) | 51 27 | 58 | 15 | 17 | 28 | 16 |
| 1883 | Sa. | 4984 | 1805 | 1290 | Th. 12 | | (4) | 6 58 | 59 | 16 | 18 | 29 | 17 |
| B.1884 | Su. | 4985 | 1806 | 1291 | Fr. 11 | | (5) | 22 30 | 60 | 15 | 19 | 30 | 18 |
| 1885 | Tu. | 4986 | 1807 | 1292 | Sa. 11 | | (6) | 38 1 | 61 | 15 | 20 | 31 | 19 |
| 1886 | We. | 4987 | 1808 | 1293 | Su. 11 | B. | (0) | 53 32 | 62 | 15 | 21 | 32 | 20 |
| 1887 | Th. | 4988 | 1809 | 1294 | Tu. 12 | | (2) | 9 3 | 63 | 16 | 22 | 33 | 21 |
| B.1888 | Fr. | 4989 | 1810 | 1295 | We. 11 | | (3) | 24 35 | 64 | 15 | 23 | 34 | 22 |
| 1889 | Su. | 4990 | 1811 | 1296 | Th. 11 | | (4) | 40 6 | 65 | 15 | 24 | 35 | 23 |
| 1890 | Mo. | 4991 | 1812 | 1297 | Fr. 11 | B. | (5) | 55 37 | 66 | 15 | 25 | 36 | 24 |
| 1891 | Tu. | 4992 | 1813 | 1298 | Su. 12 | | (0) | 11 8 | 67 | 16 | 26 | 37 | 25 |
| B.1892 | We. | 4993 | 1814 | 1299 | Mo. 11 | | (1) | 26 40 | 68 | 15 | 27 | 38 | 26 |
| 1893 | Fr. | 4994 | 1815 | 1300 | Tu. 11 | | (2) | 42 11 | 69 | 15 | 28 | 39 | 27 |
| 1894 | Sa. | 4995 | 1816 | 1301 | We. 11 | B. | (3) | 57 42 | 70 | 15 | 29 | 40 | 28 |
| 1895 | Su. | 4996 | 1817 | 1302 | Fr. 12 | | (5) | 13 13 | 71 | 16 | 30 | 41 | 29 |
| B.1896 | Mo. | 4997 | 1818 | 1303 | Sa. 11 | | (6) | 28 45 | 72 | 15 | 31 | 42 | 30 |
| 1897 | We. | 4998 | 1819 | 1304 | Su. 11 | | (0) | 44 16 | 73 | 15 | 32 | 43 | 31 |
| 1898 | Th. | 4999 | 1820 | 1305 | Mo. 11 | B. | (1) | 59 47 | 74 | 15 | 33 | 44 | 32 |
| 1899 | Fr. | 5000 | 1821 | 1306 | We. 12 | | (3) | 15 18 | 75 | 16 | 34 | 45 | 33 |
| 1900 | Sa. | 5001 | 1822 | 1307 | Th. 12 | | (4) | 30 15 | 76 | 16 | 35 | 46 | 34 |

| I. | PART II.—LUNI-SOLAR YEAR. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | XII. | | XIII. | XIV. | XV. | XVI. | XVII. | XVIII. | | XIX. | | |
| Christian Year. A.D. | Begins on the new moon occurring next before the 1st Visakha of the Sidereal year. Kaliyug. | Samvat. | Begins on the 1st of the lunar month Aswin. Fasli of Upper India. | Character of the year, and initial of *Adhik* or 'found' month, in intercalary year. (See p. 176.) | Date of the last mean conjunction of ☉ and ☽, whence the new luni-solar year commences. Old Style. | Same date in Hindú Sidereal month Chaitra. (civ. acct.) | Number of days in the Sidereal month Chaitra. | Buddhist Era of India, Ceylon, Ava, Siam, etc. | Burmese Vulgar Era (used also in Arracan, etc.) | Chinese Era. Year of the Cycle of 60. | Approximate commencement from the new moon next before ☉ enters ♈ in old style. | Years in which intercalary months are introduced. |
| B.1600 | 4701 | 1657 | 1008 | A.S. | We. 5 Mar. | 8 | 30 | 2143 | 962 | 37 | 3 Feb. | |
| 1601 | 4702 | 1658 | 1009 | | Mo. 23 Mar. | 26 | 30 | 2144 | 963 | 38 | 23 Jan. | |
| 1602 | 4703 | 1659 | 1010 | | Sa. 13 Mar. | 16 | 30 | 2145 | 964 | 39 | 13 Jan. | * |
| 1603 | 4704 | 1660 | 1011 | A.A. | We. 2 Mar. | 5 | 31 | 2146 | 965 | 40 | 31 Jan. | |
| B.1604 | 4705 | 1661 | 1012 | | Tu. 20 Mar. | 23 | 30 | 2147 | 966 | 41 | 21 Jan. | * |
| 1605 | 4706 | 1662 | 1013 | | Sa. 9 Mar. | 12 | 30 | 2148 | 967 | 42 | 7 Feb. | |
| 1606 | 4707 | 1663 | 1014 | A.V. | Th. 27 Feb. | 2 | 30 | 2149 | 968 | 43 | 28 Jan. | |
| 1607 | 4708 | 1664 | 1015 | | We. 18 Mar. | 21 | 31 | 2150 | 969 | 44 | 18 Jan. | * |
| B.1608 | 4709 | 1665 | 1016 | A.B. | Su. 6 Mar. | 9 | 30 | 2151 | 970 | 45 | 5 Feb. | |
| 1609 | 4710 | 1666 | 1017 | | Sa. 25 Mar. | 28 | 30 | 2152 | 971 | 46 | 25 Jan. | |
| 1610 | 4711 | 1667 | 1018 | | We. 14 Mar. | 17 | 30 | 2153 | 972 | 47 | 14 Jan. | * |
| 1611 | 4712 | 1668 | 1019 | A.S. | Mo. 4 Mar. | 7 | 31 | 2154 | 973 | 48 | 2 Feb. | |
| B.1612 | 4713 | 1669 | 1020 | | Su. 22 Mar. | 25 | 30 | 2155 | 974 | 49 | 23 Jan. | * |
| 1613 | 4714 | 1670 | 1021 | | Th. 11 Mar. | 14 | 30 | 2156 | 975 | 50 | 9 Feb. | |
| 1614 | 4715 | 1671 | 1022 | A.J. | Mo. 28 Feb. | 3 | 31 | 2157 | 976 | 51 | 29 Jan. | |
| 1615 | 4716 | 1672 | 1023 | | Su. 19 Mar. | 22 | 31 | 2158 | 977 | 52 | 19 Jan. | * |
| B.1616 | 4717 | 1673 | 1024 | A.C. | Fr. 8 Mar. | 11 | 30 | 2159 | 978 | 53 | 7 Feb. | |
| 1617 | 4718 | 1674 | 1025 | | We. 26 Mar. | 29 | 30 | 2160 | 979 | 54 | 26 Jan. | |
| 1618 | 4719 | 1675 | 1026 | | Mo. 16 Mar. | 19 | 31 | 2161 | 980 | 55 | 15 Jan. | * |
| 1619 | 4720 | 1676 | 1027 | A.S. | Fr. 5 Mar. | 8 | 31 | 2162 | 981 | 56 | 3 Feb. | |
| B.1620 | 4721 | 1677 | 1028 | | Th. 23 Mar. | 26 | 30 | 2163 | 982 | 57 | 24 Jan. | * |
| 1621 | 4722 | 1678 | 1029 | | Mo. 12 Mar. | 15 | 30 | 2164 | 983 | 58 | 10 Feb. | |
| 1622 | 4723 | 1679 | 1030 | A.A. | Sa. 2 Mar. | 5 | 31 | 2165 | 984 | 59 | 31 Jan. | |
| 1623 | 4724 | 1680 | 1031 | | Fr. 21 Mar. | 24 | 31 | 2166 | 985 | 60 | 21 Jan. | * |
| B.1624 | 4725 | 1681 | 1032 | | Tu. 9 Mar. | 12 | 30 | 2167 | 986 | 1 | 8 Feb. | |
| 1625 | 4726 | 1682 | 1033 | A.V. | Sa. 26 Feb. | 1 | 30 | 2168 | 987 | 2 | 27 Jan. | |
| 1626 | 4727 | 1683 | 1034 | | Fr. 17 Mar. | 20 | 31 | 2169 | 988 | 3 | 17 Jan. | * |
| 1627 | 4728 | 1684 | 1035 | A.B. | We. 7 Mar. | 9 | 30 | 2170 | 989 | 4 | 5 Feb. | |
| B.1628 | 4729 | 1685 | 1036 | | Tu. 25 Mar. | 28 | 30 | 2171 | 990 | 5 | 26 Jan. | |
| 1629 | 4730 | 1686 | 1037 | | Sa. 14 Mar. | 17 | 30 | 2172 | 991 | 6 | 14 Jan. | * |
| 1630 | 4731 | 1687 | 1038 | A.S. | We. 3 Mar. | 6 | 31 | 2173 | 992 | 7 | 1 Feb. | |
| 1631 | 4732 | 1688 | 1039 | | Tu. 22 Mar. | 24 | 30 | 2174 | 993 | 8 | 22 Jan. | * |
| B.1632 | 4733 | 1689 | 1040 | | Su. 11 Mar. | 14 | 30 | 2175 | 994 | 9 | 10 Feb. | |
| 1633 | 4734 | 1690 | 1041 | A.J. | Th. 28 Feb. | 3 | 30 | 2176 | 995 | 10 | 29 Jan. | |
| 1634 | 4735 | 1691 | 1042 | | We. 19 Mar. | 22 | 31 | 2177 | 996 | 11 | 19 Jan. | * |
| 1635 | 4736 | 1692 | 1043 | A.C. | Su. 8 Mar. | 10 | 30 | 2178 | 997 | 12 | 6 Feb. | |
| B.1636 | 4737 | 1693 | 1044 | | Sa. 26 Feb. | 29 | 30 | 2179 | 998 | 13 | 27 Jan. | |
| 1637 | 4738 | 1694 | 1045 | | Th. 16 Mar. | 19 | 30 | 2180 | 999 | 14 | 16 Jan. | * |
| 1638 | 4739 | 1695 | 1046 | A.S. | Mo. 5 Mar. | 8 | 31 | 2181 | 1000 | 15 | 3 Feb. | |
| 1639 | 4740 | 1696 | 1047 | | Su. 24 Mar. | 26 | 30 | 2182 | 1001 | 16 | 24 Jan. | |
| B.1640 | 4741 | 1697 | 1048 | | Th. 12 Mar. | 15 | 30 | 2183 | 1002 | 17 | 13 Jan. | * |
| 1641 | 4742 | 1698 | 1049 | A.A. | Tu. 2 Mar. | 5 | 31 | 2184 | 1003 | 18 | 31 Jan. | |
| 1642 | 4743 | 1699 | 1050 | | Su. 20 Mar. | 23 | 31 | 2185 | 1004 | 19 | 20 Jan. | * |
| 1643 | 4744 | 1700 | 1051 | | Fr. 10 Mar. | 12 | 30 | 2186 | 1005 | 20 | 8 Feb. | |
| B.1644 | 4745 | 1701 | 1052 | A.V. | Th. 27 Feb. | 1 | 30 | 2187 | 1006 | 21 | 28 Jan. | |
| 1645 | 4746 | 1702 | 1053 | | Mo. 17 Mar. | 20 | 31 | 2188 | 1007 | 22 | 17 Jan. | * |
| 1646 | 4747 | 1703 | 1054 | A.B. | Fr. 6 Mar. | 9 | 31 | 2189 | 1008 | 23 | 4 Feb. | |
| 1647 | 4748 | 1704 | 1055 | | Th. 25 Mar. | 27 | 30 | 2190 | 1009 | 24 | 25 Jan. | |
| B.1648 | 4749 | 1705 | 1056 | | Tu. 14 Mar. | 17 | 30 | 2191 | 1010 | 25 | 15 Jan. | * |
| 1649 | 4750 | 1706 | 1057 | A.S. | Sa. 3 Mar. | 6 | 31 | 2192 | 1011 | 26 | 1 Feb. | |

LXXII. Cycle.

LXXIII. Cycle.

(This table includes the Burmese luni-solar era, which accords with the Hindú, and the Chinese, which begins one moon earlier.) The Vilávatí revenue year of Orissa agrees numerically with the Fasli; but its divisions are solar, being the same as column VI. until A.D. 1809, after which it is always one day earlier than the latter.

PART II.—LUNI-SOLAR YEAR.

| I. | XII. | | XIII. | XIV. | XV. | XVI. | XVII. | | XVIII. | | XIX. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Christian Year. A. D. | Begins on the new moon occurring next before the 1st Visakha of the Sidereal year. Kaliyug. | Samvat. | Begins on the 1st of the lunar month Aswin. Fasl of Upper India. | Character of the year, and initial of *Adhik* or 'lound' month, in intercalary year. (See p. 176.) | Date of the last mean conjunction of ☉ and ☽, whence the new luni-solar year commences. Old Style. | Same date in Hindú Sidereal month Chaitra. (div. acct.) | Number of days in the Sidereal month Chaitra. | Buddhist Era of India, Ceylon, Ava, Siam, etc. | Burmese Vulgar Era (used also in Arracan, etc.) | Chinese Era. Year of the Cycle of 60. | Approximate commencement from the new moon next before ☉ enters ♓ in old style. | Years in which intercalary months are introduced. |
| 1650 | 4751 | 1707 | 1058 | | Fr. 22 Mar. | 24 | 30 | 2193 | 1012 | 27 | 22 Jan. | * |
| 1651 | 4752 | 1708 | 1059 | | Tu. 11 Mar. | 13 | 30 | 2194 | 1013 | 28 | 9 Feb. | |
| B.1652 | 4753 | 1709 | 1060 | A.J. | Su. 29 Feb | 3 | 30 | 2195 | 1014 | 29 | 30 Jan. | |
| 1653 | 4754 | 1710 | 1061 | | Sa. 19 Mar. | 22 | 31 | 2196 | 1015 | 30 | 19 Jan. | * |
| 1654 | 4755 | 1711 | 1062 | A.C. | We. 8 Mar. | 10 | 30 | 2197 | 1016 | 31 | 6 Feb. | |
| 1655 | 4756 | 1712 | 1063 | | Tu. 27 Mar. | 29 | 30 | 2198 | 1017 | 32 | 27 Jan. | |
| B.1656 | 4757 | 1713 | 1064 | | Sa. 15 Mar. | 18 | 30 | 2199 | 1018 | 33 | 16 Jan. | * |
| 1657 | 4758 | 1714 | 1065 | A.S. | Th. 5 Mar. | 8 | 31 | 2200 | 1019 | 34 | 3 Feb. | |
| 1658 | 4759 | 1715 | 1066 | | Tu 23 Mar. | 25 | 30 | 2201 | 1020 | 35 | 23 Jan. | |
| 1659 | 4760 | 1716 | 1067 | | Su. 13 Mar. | 15 | 30 | 2202 | 1021 | 36 | 13 Jan. | * |
| B.1660 | 4761 | 1717 | 1068 | A.A. | Th. 1 Mar. | 4 | 30 | 2203 | 1022 | 37 | 31 Jan. | |
| 1661 | 4762 | 1718 | 1069 | | We. 20 Mar. | 23 | 31 | 2204 | 1023 | 38 | 20 Jan. | * |
| 1662 | 4763 | 1719 | 1070 | | Su. 9 Mar. | 11 | 30 | 2205 | 1024 | 39 | 7 Feb. | |
| 1663 | 4764 | 1720 | 1071 | A.V. | Th. 26 Feb. | 1 | 30 | 2206 | 1025 | 40 | 28 Jan. | |
| B.1664 | 4765 | 1721 | 1072 | | Th. 17 Mar. | 20 | 30 | 2207 | 1026 | 41 | 18 Jan. | * |
| 1665 | 4766 | 1722 | 1073 | A.B. | Mo. 6 Mar. | 9 | 31 | 2208 | 1027 | 42 | 4 Feb. | |
| 1666 | 4767 | 1723 | 1074 | | Su. 25 Mar. | 27 | 30 | 2209 | 1028 | 43 | 25 Jan. | |
| 1667 | 4768 | 1724 | 1075 | | Th. 14 Mar. | 16 | 30 | 2210 | 1029 | 44 | 14 Jan. | * |
| B.1668 | 4769 | 1725 | 1076 | A.S. | Tu. 3 Mar. | 6 | 31 | 2211 | 1030 | 45 | 2 Feb. | |
| 1669 | 4770 | 1726 | 1077 | | Mo. 22 Mar. | 25 | 31 | 2212 | 1031 | 46 | 22 Jan. | * |
| 1670 | 4771 | 1727 | 1078 | | Fr. 11 Mar. | 13 | 30 | 2213 | 1032 | 47 | 9 Feb. | |
| 1671 | 4772 | 1728 | 1079 | A.J. | Tu. 28 Feb. | 2 | 30 | 2214 | 1033 | 48 | 29 Jan. | |
| B.1672 | 4773 | 1729 | 1080 | | Mo. 18 Mar. | 21 | 31 | 2215 | 1034 | 49 | 19 Jan. | * |
| 1673 | 4774 | 1730 | 1081 | A.C. | Sa. 8 Mar. | 11 | 31 | 2216 | 1035 | 50 | 6 Feb. | |
| 1674 | 4775 | 1731 | 1082 | | Fr. 27 Mar. | 29 | 30 | 2217 | 1036 | 51 | 27 Jan. | |
| 1675 | 4776 | 1732 | 1083 | | Tu. 16 Mar. | 18 | 30 | 2218 | 1037 | 52 | 16 Jan. | * |
| B.1676 | 4777 | 1733 | 1084 | A.S. | Sa. 4 Mar. | 7 | 31 | 2219 | 1038 | 53 | 3 Feb. | |
| 1677 | 4778 | 1734 | 1085 | | Fr. 23 Mar. | 26 | 31 | 2220 | 1039 | 54 | 23 Jan. | |
| 1678 | 4779 | 1735 | 1086 | | We. 13 Mar. | 15 | 30 | 2221 | 1040 | 55 | 13 Jan. | * |
| 1679 | 4780 | 1736 | 1087 | A.A. | Su. 2 Mar. | 4 | 30 | 2222 | 1041 | 56 | 31 Jan. | |
| B.1680 | 4781 | 1737 | 1088 | | Sa. 20 Mar. | 23 | 31 | 2223 | 1042 | 57 | 21 Jan. | * |
| 1681 | 4782 | 1738 | 1089 | A.C.A.[1] | We. 9 Mar. | 11 | 30 | 2224 | 1043 | 58 | 7 Feb. | |
| 1682 | 4783 | 1739 | 1090 | | Tu. 23 Mar. | 30 | 30 | 2225 | 1044 | 59 | 28 Jan. | |
| 1683 | 4784 | 1740 | 1091 | | Sa. 17 Mar. | 19 | 30 | 2226 | 1045 | 60 | 17 Jan. | * |
| B.1684 | 4785 | 1741 | 1092 | A.B. | Th. 6 Mar. | 9 | 31 | 2227 | 1046 | 1 | 5 Feb. | |
| 1685 | 4786 | 1742 | 1093 | | We. 25 Mar. | 27 | 30 | 2228 | 1047 | 2 | 25 Jan. | |
| 1686 | 4787 | 1743 | 1094 | | Su. 14 Mar. | 16 | 30 | 2229 | 1048 | 3 | 14 Jan. | * |
| 1687 | 4788 | 1744 | 1095 | A.A. | Th. 3 Mar. | 5 | 30 | 2230 | 1049 | 4 | 1 Feb. | * |
| B.1688 | 4789 | 1745 | 1096 | | We. 21 Mar. | 24 | 31 | 2231 | 1050 | 5 | 22 Jan. | |
| 1689 | 4790 | 1746 | 1097 | | Mo. 11 Mar. | 13 | 30 | 2232 | 1051 | 6 | 9 Feb. | |
| 1690 | 4791 | 1747 | 1098 | A.V. | Fr. 26 Feb. | 2 | 30 | 2233 | 1052 | 7 | 28 Jan. | |
| 1691 | 4792 | 1748 | 1099 | | Th. 19 Mar. | 21 | 30 | 2234 | 1053 | 8 | 19 Jan. | * |
| B.1692 | 4793 | 1749 | 1100 | A.B. | Mo. 7 Mar. | 10 | 31 | 2235 | 1054 | 9 | 6 Feb. | |
| 1693 | 4794 | 1750 | 1101 | | Su. 26 Mar. | 28 | 30 | 2236 | 1055 | 10 | 26 Jan. | |
| 1694 | 4795 | 1751 | 1102 | | Fr. 16 Mar. | 18 | 30 | 2237 | 1056 | 11 | 16 Jan. | * |
| 1695 | 4796 | 1752 | 1103 | A.S. | Tu. 5 Mar. | 7 | 30 | 2238 | 1057 | 12 | 3 Feb. | * |
| B.1696 | 4797 | 1753 | 1104 | | Mo. 23 Mar. | 26 | 31 | 2239 | 1058 | 13 | 24 Jan. | |
| 1697 | 4798 | 1754 | 1105 | | Fr. 12 Mar. | 14 | 30 | 2240 | 1059 | 14 | 10 Feb. | |
| 1698 | 4799 | 1755 | 1106 | A.J. | We. 2 Mar. | 4 | 30 | 2241 | 1060 | 15 | 31 Jan. | |
| 1699 | 4800 | 1756 | 1107 | | Tu. 21 Mar. | 23 | 31 | 2242 | 1061 | 16 | 21 Jan. | * |

LXXIV. Cycle.

[1] In the current year K. Y. 4783, the months Chaitra and Aswina are repeated, and the month Agrahana is *kshaya* or expunged.

| I. | PART II.—LUNI-SOLAR YEAR. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | XII. | | XIII. | XIV. | XV. | XVI. | XVII. | XVIII. | | XIX. | | | |
| Christian Year. A.D. | Begins on the new moon occurring next before the 1st Visakha of the Sidereal year. Kaliyug. | Samvat. | Begins on the 1st of the lunar month Aswin. Fasli of Upper India. | Character of the year, and initial of *Adhik* or 'lound' month, in intercalary year. (See p. 175.) | Date of the last mean conjunction of ☉ and ☽, whence the new luni-solar year commences. Old Style. | Same date in Hindu Sidereal month Chaitra. (civ. acct.) | Number of days in the Sidereal month Chaitra. | Buddhist Era of India, Ceylon, Ava, Siam, etc. | Burmese Vulgar Era (used also in Arracan, etc.) | Chinese Era. Year of the Cycle of 60. | Approximate commencement from the new moon next before ☉ enters ♓ in old style. | Years in which intercalary months are introduced. |
| B.1700 | 4801 | 1757 | 1108 | A.C. | Sa. 9 Mar. | 12 | 31 | 2243 | 1062 | 17 | 8 Feb. | |
| 1701 | 4802 | 1758 | 1109 | A.V. | Fr. 28 Mar. | 30 | 30 | 2244 | 1063 | 18 | 28 Jan. | |
| 1702 | 4803 | 1759 | 1110 | | Tu. 17 Mar. | 19 | 30 | 2245 | 1064 | 19 | 17 Jan. | * |
| 1703 | 4804 | 1760 | 1111 | A.S. | Sa. 6 Mar. | 8 | 31 | 2246 | 1065 | 20 | 4 Feb. | |
| B.1704 | 4805 | 1761 | 1112 | | Fr. 24 Mar. | 27 | 31 | 2247 | 1066 | 21 | 25 Jan. | |
| 1705 | 4806 | 1762 | 1113 | | We. 14 Mar. | 16 | 30 | 2248 | 1067 | 22 | 14 Jan. | * |
| 1706 | 4807 | 1763 | 1114 | A.J. | Su. 3 Mar. | 5 | 30 | 2249 | 1068 | 23 | 1 Feb. | |
| 1707 | 4808 | 1764 | 1115 | | Sa. 22 Mar. | 24 | 31 | 2250 | 1069 | 24 | 22 Jan. | * |
| B.1708 | 4809 | 1765 | 1116 | | We. 10 Mar. | 12 | 30 | 2251 | 1070 | 25 | 9 Feb. | |
| 1709 | 4810 | 1766 | 1117 | A.C. | Mo. 28 Feb. | 2 | 30 | 2252 | 1071 | 26 | 29 Jan. | |
| 1710 | 4811 | 1767 | 1118 | | Sa. 18 Mar. | 20 | 30 | 2253 | 1072 | 27 | 18 Jan. | * |
| 1711 | 4812 | 1768 | 1119 | A.B. | Th. 8 Mar. | 10 | 31 | 2254 | 1073 | 28 | 6 Feb. | |
| B.1712 | 4813 | 1769 | 1120 | | We. 26 Mar. | 28 | 30 | 2255 | 1074 | 29 | 27 Jan. | |
| 1713 | 4814 | 1770 | 1121 | | Su. 15 Mar. | 17 | 30 | 2256 | 1075 | 30 | 15 Jan. | * |
| 1714 | 4815 | 1771 | 1122 | A.A. | Th. 4 Mar. | 6 | 30 | 2257 | 1076 | 31 | 2 Feb. | |
| 1715 | 4816 | 1772 | 1123 | | We. 23 Mar. | 25 | 31 | 2258 | 1077 | 32 | 23 Jan. | |
| B.1716 | 4817 | 1773 | 1124 | | Mo. 12 Mar. | 14 | 30 | 2259 | 1078 | 33 | 13 Jan. | * |
| 1717 | 4818 | 1774 | 1125 | A.V. | Fr. 1 Mar. | 3 | 30 | 2260 | 1079 | 34 | 30 Jan. | |
| 1718 | 4819 | 1775 | 1126 | | Th. 20 Mar. | 22 | 30 | 2261 | 1080 | 35 | 20 Jan. | * |
| 1719 | 4820 | 1776 | 1127 | | Tu. 10 Mar. | 11 | 31 | 2262 | 1081 | 36 | 8 Feb. | |
| B.1720 | 4821 | 1777 | 1128 | A.B. | Sa. 27 Feb. | 0 | 30 | 2263 | 1082 | 37 | 28 Jan. | |
| 1721 | 4822 | 1778 | 1129 | | Fr. 17 Mar. | 19 | 30 | 2264 | 1083 | 38 | 17 Jan. | * |
| 1722 | 4823 | 1779 | 1130 | A.S. | Tu. 6 Mar. | 8 | 30 | 2265 | 1084 | 39 | 4 Feb. | |
| 1723 | 4824 | 1780 | 1131 | | Mo. 25 Mar. | 27 | 31 | 2266 | 1085 | 40 | 25 Jan. | |
| B.1724 | 4825 | 1781 | 1132 | | Fr. 13 Mar. | 15 | 30 | 2267 | 1086 | 41 | 15 Jan. | 4 |
| 1725 | 4826 | 1782 | 1133 | A.J. | We. 3 Mar. | 5 | 30 | 2268 | 1087 | 42 | 2 Feb. | |
| 1726 | 4827 | 1783 | 1134 | | Tu. 22 Mar. | 24 | 31 | 2269 | 1088 | 43 | 22 Jan. | |
| 1727 | 4828 | 1784 | 1135 | | Sa. 11 Mar. | 13 | 31 | 2270 | 1089 | 44 | 11 Jan. | 3 |
| B.1728 | 4829 | 1785 | 1136 | A.C. | We. 28 Feb. | 1 | 30 | 2271 | 1090 | 45 | 30 Jan. | |
| 1729 | 4830 | 1786 | 1137 | | Tu. 18 Mar. | 20 | 30 | 2272 | 1091 | 46 | 18 Jan. | 7 |
| 1730 | 4831 | 1787 | 1138 | A.S. | Su. 8 Mar. | 10 | 31 | 2273 | 1092 | 47 | 6 Feb. | |
| 1731 | 4832 | 1788 | 1139 | | Fr. 29 Mar. | 28 | 31 | 2274 | 1093 | 48 | 27 Jan. | |
| B.1732 | 4833 | 1789 | 1140 | | We. 15 Mar. | 17 | 30 | 2275 | 1094 | 49 | 16 Jan. | 5 |
| 1733 | 4834 | 1790 | 1141 | A.A. | Su. 4 Mar. | 6 | 30 | 2276 | 1095 | 50 | 3 Feb. | |
| 1734 | 4835 | 1791 | 1142 | | Sa. 23 Mar. | 25 | 31 | 2277 | 1096 | 51 | 23 Jan. | |
| 1735 | 4836 | 1792 | 1143 | | We. 12 Mar. | 14 | 31 | 2278 | 1097 | 52 | 12 Jan. | * |
| B.1736 | 4837 | 1793 | 1144 | A.V. | Mo. 1 Mar. | 3 | 30 | 2279 | 1098 | 53 | 31 Jan. | |
| 1737 | 4838 | 1794 | 1145 | | Su. 20 Mar. | 22 | 30 | 2280 | 1099 | 54 | 20 Jan. | * |
| 1738 | 4839 | 1795 | 1146 | A.B. | Th. 9 Mar. | 11 | 31 | 2281 | 1100 | 55 | 7 Feb. | |
| 1739 | 4840 | 1796 | 1147 | | We. 28 Mar. | 29 | 30 | 2282 | 1101 | 56 | 28 Jan. | |
| B.1740 | 4841 | 1797 | 1148 | | Su. 16 Mar. | 18 | 30 | 2283 | 1102 | 57 | 17 Jan. | * |
| 1741 | 4842 | 1798 | 1149 | A.S. | Fr. 6 Mar. | 8 | 30 | 2284 | 1103 | 58 | 4 Feb. | |
| 1742 | 4843 | 1799 | 1150 | | Th. 25 Mar. | 27 | 31 | 2285 | 1104 | 59 | 25 Jan. | |
| 1743 | 4844 | 1800 | 1151 | | Mo. 14 Mar. | 15 | 30 | 2286 | 1105 | 60 | 14 Jan. | * |
| B.1744 | 4845 | 1801 | 1152 | A.J. | Fr. 2 Mar. | 4 | 30 | 2287 | 1106 | 1 | 2 Feb. | |
| 1745 | 4846 | 1802 | 1153 | | Th. 21 Mar. | 23 | 30 | 2288 | 1107 | 2 | 21 Jan. | |
| 1746 | 4847 | 1803 | 1154 | | Tu. 11 Mar. | 13 | 31 | 2289 | 1108 | 3 | 11 Jan. | 3 |
| 1747 | 4848 | 1804 | 1155 | A.C. | Sa. 28 Feb. | 1 | 30 | 2290 | 1109 | 4 | 30 Jan. | |
| B.1748 | 4849 | 1805 | 1156 | | Fr. 18 Mar. | 20 | 30 | 2291 | 1110 | 5 | 20 Jan. | 7 |
| 1749 | 4850 | 1806 | 1157 | A.S. | Tu. 7 Mar. | 9 | 30 | 2292 | 1111 | 6 | 7 Feb. | |

LXXV. Cycle.

* In the current year K. Y. 4783, the months Chaitra and Aswina are repeated, and the month Agrahana is *raya* or expunged.

PART II.—LUNI-SOLAR YEAR.

| I. | XII. | | XIII. | XIV. | XV. | XVI. | XVII. | XVIII. | | XIX. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Christian Year. A.D. | Begins on the new moon occurring next before the 1st Visakha of the Sidereal year. Kaliyug. | Samvat. | Begins on the 1st of the lunar month Aswin. Fasli of Upper India. | Character of the year, and initial of *Adhik* or 'found' month, in intercalary year. (See p. 175.) | Date of the last mean conjunction of ☉ and ☽, whence the new luni-solar year commences. New Style. | Same date in Hindú Sidereal month Chaitra. (civ. acct.) | Number of days in the Sidereal month Chaitra. | Buddhist Era of India, Ceylon, Ava, Siam, etc. | Burmese Vulgar Era. (used also in Arracan, etc.) | Chinese Era. Year of the Cycle of 60. | Ascertained commencement[1] from the new moon next before ☉ enters ♓ in new style. | Intercalary Year and No. of intercalated month. |
| 1750 | 4851 | 1807 | 1158 | | Mo. 6 Apr. | 28 | 31 | 2293 | 1112 | LXXV. Cycle. 7 | 8 Feb. | |
| 1751 | 4852 | 1808 | 1159 | | Sa. 27 Mar. | 17 | 30 | 2294 | 1113 | 8 | 28 Jan. | 5 |
| B.1752 | 4853 | 1809 | 1160 | A.A. | We. 15 Mar. | 6 | 30 | 2295 | 1114 | 9 | 15 Feb. | |
| 1753 | 4854 | 1810 | 1161 | | Tu. 3 Apr. | 25 | 30 | 2296 | 1115 | 10 | 4 Feb. | |
| 1754 | 4855 | 1811 | 1162 | | Sa. 23 Mar. | 15 | 31 | 2297 | 1116 | 11 | 24 Jan. | 4 |
| 1755 | 4856 | 1812 | 1163 | A.V. | Th. 13 Mar. | 3 | 30 | 2298 | 1117 | 12 | 12 Feb. | |
| B.1756 | 4857 | 1813 | 1164 | | Tu. 30 Mar. | 21 | 30 | 2299 | 1118 | 13 | 1 Feb. | 9 |
| 1757 | 4858 | 1814 | 1165 | A.B. | Su. 20 Mar | 11 | 31 | 2300 | 1119 | 14 | 19 Feb. | |
| 1758 | 4859 | 1815 | 1166 | | Sa. 8 Apr. | 30 | 31 | 2301 | 1120 | 15 | 9 Feb. | |
| 1759 | 4860 | 1816 | 1167 | | We. 28 Mar. | 18 | 30 | 2302 | 1121 | 16 | 30 Jan. | 6 |
| B.1760 | 4861 | 1817 | 1168 | A.S. | Su. 16 Mar. | 7 | 30 | 2303 | 1122 | 17 | 18 Feb. | |
| 1761 | 4862 | 1818 | 1169 | | Sa. 4 Apr. | 26 | 31 | 2304 | 1123 | 18 | 6 Feb. | |
| 1762 | 4863 | 1819 | 1170 | | Th. 25 Mar. | 16 | 31 | 2305 | 1124 | 19 | 26 Jan. | 5 |
| 1763 | 4864 | 1820 | 1171 | A.J. | Mo. 14 Mar. | 4 | 30 | 2306 | 1125 | 20 | 14 Feb. | |
| B.1764 | 4865 | 1821 | 1172 | | Su. 1 Apr. | 23 | 30 | 2307 | 1126 | 21 | 3 Feb. | |
| 1765 | 4866 | 1822 | 1173 | | Th. 21 Mar. | 12 | 31 | 2308 | 1127 | 22 | 21 Jan. | 2 |
| 1766 | 4867 | 1823 | 1174 | A.C. | Tu. 11 Mar. | 1 | 30 | 2309 | 1128 | 23 | 9 Feb. | |
| 1767 | 4868 | 1824 | 1175 | | Mo. 30 Mar. | 20 | 30 | 2310 | 1129 | 24 | 30 Jan. | 7 |
| B.1768 | 4869 | 1825 | 1176 | A.S. | Fr. 18 Mar. | 9 | 30 | 2311 | 1130 | 25 | 17 Feb. | |
| 1769 | 4870 | 1826 | 1177 | | Th. 6 Apr. | 28 | 31 | 2312 | 1131 | 26 | 6 Feb. | |
| 1770 | 4871 | 1827 | 1178 | | Mo. 26 Mar. | 16 | 30 | 2313 | 1132 | 27 | 26 Jan. | 5 |
| 1771 | 4872 | 1828 | 1179 | A.A. | Sa. 16 Mar. | 6 | 30 | 2314 | 1133 | 28 | 14 Feb. | |
| B.1772 | 4873 | 1829 | 1180 | | Fr. 3 Apr. | 25 | 30 | 2315 | 1134 | 29 | 3 Feb. | |
| 1773 | 4874 | 1830 | 1181 | | Tu 23 Mar. | 14 | 31 | 2316 | 1135 | 30 | 22 Jan. | 3 |
| 1774 | 4875 | 1831 | 1182 | A.V. | Sa. 12 Mar. | 2 | 30 | 2317 | 1136 | 31 | 10 Feb. | |
| 1775 | 4876 | 1832 | 1183 | | Fr. 31 Mar. | 21 | 30 | 2318 | 1137 | 32 | 30 Jan. | 10 |
| B.1776 | 4877 | 1833 | 1184 | A.B. | We. 20 Mar. | 10 | 30 | 2319 | 1138 | 33 | 18 Feb. | |
| 1777 | 4878 | 1834 | 1185 | | Mo. 7 Apr. | 29 | 31 | 2320 | 1139 | 34 | 7 Feb. | |
| 1778 | 4879 | 1835 | 1186 | | Sa. 28 Mar. | 18 | 30 | 2321 | 1140 | 35 | 27 Jan. | 6 |
| 1779 | 4880 | 1836 | 1187 | A.S. | We. 17 Mar. | 7 | 30 | 2322 | 1141 | 36 | 15 Feb. | |
| B.1780 | 4881 | 1837 | 1188 | | Tu. 4 Apr. | 26 | 30 | 2323 | 1142 | 37 | 5 Feb. | |
| 1781 | 4882 | 1838 | 1189 | | Sa. 24 Mar. | 15 | 31 | 2324 | 1143 | 38 | 24 Jan. | 5 |
| 1782 | 4883 | 1839 | 1190 | A.J. | Th. 14 Mar. | 4 | 30 | 2325 | 1144 | 39 | 13 Feb. | |
| 1783 | 4884 | 1840 | 1191 | | We. 2 Apr. | 23 | 30 | 2326 | 1145 | 40 | 3 Feb. | |
| B.1784 | 4885 | 1841 | 1192 | | Su. 21 Mar. | 12 | 31 | 2327 | 1146 | 41 | 23 Jan. | 3 |
| 1785 | 4886 | 1842 | 1193 | A.C. | Th. 10 Mar. | 1 | 31 | 2328 | 1147 | 42 | 10 Feb. | |
| 1786 | 4887 | 1843 | 1194 | | We. 29 Mar. | 19 | 30 | 2329 | 1148 | 43 | 31 Jan. | 7 |
| 1787 | 4888 | 1844 | 1195 | A.S. | Mo. 19 Mar. | 9 | 30 | 2330 | 1149 | 44 | 19 Feb. | |
| B.1788 | 4889 | 1845 | 1196 | | Su. 6 Apr. | 28 | 31 | 2331 | 1150 | 45 | 8 Feb. | |
| 1789 | 4890 | 1846 | 1197 | | Th. 26 Mar. | 17 | 31 | 2332 | 1151 | 46 | 27 Jan. | 5 |
| 1790 | 4891 | 1847 | 1198 | A.A. | Mo. 15 Mar. | 5 | 30 | 2333 | 1152 | 47 | 15 Feb. | |
| 1791 | 4892 | 1848 | 1199 | | Su. 3 Apr. | 24 | 30 | 2334 | 1153 | 48 | 4 Feb. | |
| B.1792 | 4893 | 1849 | 1200 | | Fr. 23 Mar. | 14 | 31 | 2335 | 1154 | 49 | 24 Jan. | 4 |
| 1793 | 4894 | 1850 | 1201 | A.V. | Tu. 12 Mar. | 3 | 31 | 2336 | 1155 | 50 | 11 Feb. | |
| 1794 | 4895 | 1851 | 1202 | | Mo. 31 Mar. | 21 | 30 | 2337 | 1156 | 51 | 31 Jan. | |
| 1795 | 4896 | 1852 | 1203 | A.B. | Fr. 20 Mar. | 10 | 30 | 2338 | 1157 | 52 | 21 Jan. | 2 |
| B.1796 | 4897 | 1853 | 1204 | | Th. 7 Apr. | 29 | 31 | 2339 | 1158 | 53 | 9 Feb. | |
| 1797 | 4898 | 1854 | 1205 | | Tu. 28 Mar. | 18 | 30 | 2340 | 1159 | 54 | 28 Jan. | 6 |
| 1798 | 4899 | 1855 | 1206 | A.S. | Sa. 17 Mar. | 7 | 30 | 2341 | 1160 | 55 | 16 Feb. | |
| 1799 | 4900 | 1856 | 1207 | | Fr. 5 Apr. | 26 | 30 | 2342 | 1161 | 56 | 5 Feb. | |

[1] The particulars of the Chinese years from A.D. 1723 to 1733 inclusive, are taken from Bayer's 'Parergon Sinicum.' Those from 1745 to 1818, from a Chinese calendar:—and some few subsequent years from authentic sources. The rest are supplied by calculation.

| I. | PART II.—LUNI-SOLAR YEAR. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | XII. | | XIII. | XIV. | XV. | XVI. | XVII. | XVIII. | | XIX. | | |
| Christian Year. A. D. | Begins on the new moon occurring next before the 1st Visakha of the Sidereal year. Kaliyug. | Samvat. | Begins on the 1st of the lunar month Aswin. Fasli of Upper India. | Character of the year, and initial of *Adhik* or 'lound' month, in intercalary year. (See p. 175.) | Date of the last mean conjunction of ☉ and ☽ whence the new luni-solar year commences. New Style. | Same date in Hindu Sidereal month Chaitra. (civ. acct.) | Number of days in the Sidereal month Chaitra. | Buddhist Era of India, Ceylon, Ava, Siam, etc. | Burmese Vulgar Era (used also in Arracan, etc.) | Chinese Era. Year of the Cycle of 60. | Ascertained commencement from the new moon next before ☉ enters ♈ in new style. | Intercalary year and No. of intercalated month. |
| 1800 | 4901 | 1857 | 1208 | | Tu. 25 Mar. | 15 | 31 | 2343 | 1162 | 57 | 25 Jan. | 4 |
| 1801 | 4902 | 1858 | 1209 | A.J. | Su. 15 Mar. | 4 | 30 | 2344 | 1163 | 58 | 13 Feb. | |
| 1802 | 4903 | 1859 | 1210 | | Fr. 2 Apr. | 22 | 30 | 2345 | 1164 | 59 | 3 Feb. | |
| 1803 | 4904 | 1860 | 1211 | | We. 23 Mar. | 12 | 30 | 2346 | 1165 | 60 | 23 Jan. | 3 |
| B.1804 | 4905 | 1861 | 1212 | A.C. | Su. 11 Mar. | 1 | 31 | 2347 | 1166 | 1 | 11 Feb. | |
| 1805 | 4906 | 1862 | 1213 | | Sa. 30 Mar. | 19 | 30 | 2348 | 1167 | 2 | 31 Jan. | 6 |
| 1806 | 4907 | 1863 | 1214 | A.S. | We. 19 Mar. | 8 | 30 | 2349 | 1168 | 3 | 19 Feb. | |
| 1807 | 4908 | 1864 | 1215 | | Tu. 7 Apr. | 27 | 30 | 2350 | 1169 | 4 | 8 Feb. | |
| B.1808 | 4909 | 1865 | 1216 | | Su. 27 Mar. | 17 | 31 | 2351 | 1170 | 5 | 29 Jan. | 5 |
| 1809 | 4910 | 1866 | 1217 | A.A. | Th. 16 Mar. | 5 | 30 | 2352 | 1171 | 6 | 16 Feb. | |
| 1810 | 4911 | 1867 | 1218 | | We. 4 Apr. | 24 | 30 | 2353 | 1172 | 7 | 6 Feb. | 3 |
| 1811 | 4912 | 1868 | 1219 | | Su. 24 Mar. | 13 | 30 | 2354 | 1173 | 8 | 27 Jan. | |
| B.1812 | 4913 | 1869 | 1220 | A.V. | Fr. 13 Mar. | 3 | 31 | 2355 | 1174 | 9 | 15 Feb. | |
| 1813 | 4914 | 1870 | 1221 | | Th. 1 Apr. | 21 | 30 | 2356 | 1175 | 10 | 3 Feb. | 9 |
| 1814 | 4915 | 1871 | 1222 | A.B. | Mo. 21 Mar. | 10 | 30 | 2357 | 1176 | 11 | 21 Feb. | |
| 1815 | 4916 | 1872 | 1223 | | Su. 9 Apr. | 29 | 31 | 2358 | 1177 | 12 | 10 Feb. | |
| B.1816 | 4917 | 1873 | 1224 | | Th. 28 Mar. | 18 | 31 | 2359 | 1178 | 13 | 30 Jan. | 6 |
| 1817 | 4918 | 1874 | 1225 | A.S. | Tu. 18 Mar. | 7 | 30 | 2360 | 1179 | 14 | 17 Feb. | |
| 1818 | 4919 | 1875 | 1226 | | Su. 5 Apr. | 25 | 30 | 2361 | 1180 | 15 | 6 Feb. | |
| 1819 | 4920 | 1876 | 1227 | | Fr. 26 Mar. | 15 | 31 | 2362 | 1181 | 16 | 27 Jan. | 3 |
| B.1820 | 4921 | 1877 | 1228 | A.J. | Tu. 14 Mar. | 4 | 31 | 2363 | 1182 | 17 | 13 Feb. | |
| 1821 | 4922 | 1878 | 1229 | | Mo. 2 Apr. | 22 | 30 | 2364 | 1183 | 18 | 2 Feb. | |
| 1822 | 4923 | 1879 | 1230 | | Sa. 23 Mar. | 12 | 30 | 2365 | 1184 | 19 | 23 Jan. | 4 |
| 1823 | 4924 | 1880 | 1231 | A.C.A.[1] | We. 12 Mar. | 1 | 31 | 2366 | 1185 | 20 | 10 Feb. | |
| B.1824 | 4925 | 1881 | 1232 | | Tu. 30 Mar. | 20 | 31 | 2367 | 1186 | 21 | 31 Jan. | |
| 1825 | 4926 | 1882 | 1233 | A.S. | Sa. 19 Mar. | 8 | 30 | 2368 | 1187 | 22 | 17 Feb. | 5 |
| 1826 | 4927 | 1883 | 1234 | | Fr. 7 Apr. | 27 | 30 | 2369 | 1188 | 23 | 7 Feb. | |
| 1827 | 4928 | 1884 | 1235 | | Tu. 27 Mar. | 16 | 31 | 2370 | 1189 | 24 | 27 Jan. | 6 |
| B.1828 | 4929 | 1885 | 1236 | A.A. | Su. 16 Mar. | 6 | 30 | 2371 | 1190 | 25 | 15 Feb. | |
| 1829 | 4930 | 1886 | 1237 | | Sa. 4 Apr. | 24 | 30 | 2372 | 1191 | 26 | 4 Feb. | 7 |
| 1830 | 4931 | 1887 | 1238 | | We. 24 Mar. | 13 | 30 | 2373 | 1192 | 27 | 24 Jan. | |
| 1831 | 4932 | 1888 | 1239 | A.V. | Su. 13 Mar. | 2 | 31 | 2374 | 1193 | 28 | 11 Feb. | |
| B.1832 | 4933 | 1889 | 1240 | | Sa. 31 Mar. | 21 | 30 | 2375 | 1194 | 29 | 1 Feb. | 9 |
| 1833 | 4934 | 1890 | 1241 | A.B. | Th. 21 Mar. | 10 | 30 | 2376 | 1195 | 30 | 20 Feb. | |
| 1834 | 4935 | 1891 | 1242 | | We. 9 Apr. | 29 | 30 | 2377 | 1196 | 31 | 8 Feb. | |
| 1835 | 4936 | 1892 | 1243 | | Su. 29 Mar. | 18 | 31 | 2378 | 1197 | 32 | 29 Jan. | 6 |
| B.1836 | 4937 | 1893 | 1244 | A.S. | Th. 17 Mar. | 6 | 30 | 2379 | 1198 | 33 | 16 Feb. | |
| 1837 | 4938 | 1894 | 1245 | | We. 5 Apr. | 25 | 30 | 2380 | 1199 | 34 | 5 Feb. | |
| 1838 | 4939 | 1895 | 1246 | | Mo. 26 Mar. | 15 | 30 | 2381 | 1200 | 35 | 26 Jan. | 3 |
| 1839 | 4940 | 1896 | 1247 | A.J. | Fr. 15 Mar. | 4 | 31 | 2382 | 1201 | 36 | 13 Feb. | |
| B.1840 | 4941 | 1897 | 1248 | | Th. 2 Apr. | 22 | 30 | 2383 | 1202 | 37 | 3 Feb. | 4 |
| 1841 | 4942 | 1898 | 1249 | | Mo. 22 Mar. | 11 | 30 | 2384 | 1203 | 38 | 20 Feb. | |
| 1842 | 4943 | 1899 | 1250 | A.C. | Sa. 12 Mar. | 1 | 31 | 2385 | 1204 | 39 | 10 Feb. | |
| 1843 | 4944 | 1900 | 1251 | | Th. 30 Mar. | 19 | 31 | 2386 | 1205 | 40 | 30 Jan. | 5 |
| B.1844 | 4945 | 1901 | 1252 | A.S. | Tu. 19 Mar. | 8 | 30 | 2387 | 1206 | 41 | 18 Feb. | |
| 1845 | 4946 | 1902 | 1253 | | Mo. 7 Apr. | 27 | 30 | 2388 | 1207 | 42 | 7 Feb. | |
| 1846 | 4947 | 1903 | 1254 | | Fr. 27 Mar. | 16 | 31 | 2389 | 1208 | 43 | 27 Jan. | 6 |
| 1847 | 4948 | 1904 | 1255 | A.A. | Tu. 16 Mar. | 5 | 31 | 2390 | 1209 | 44 | 14 Feb. | |
| B.1848 | 4949 | 1905 | 1256 | | Mo. 3 Apr. | 23 | 30 | 2391 | 1210 | 45 | 4 Feb. | |
| 1849 | 4950 | 1906 | 1257 | | Sa. 24 Mar. | 13 | 30 | 2392 | 1211 | 46 | 24 Jan. | 7 |

LXXVI. Cycle.

[1] The expunged month in the 4924th year of the Kaliyug fell on Agrahayan, otherwise Margasius, and the intercalated months were Aswina and Chaitra of the ensuing year.

| I. | PART II.—LUNI-SOLAR YEAR. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | XII. | | XIII. | XIV. | XV. | XVI. | XVII. | | XVIII. | | XIX. | | |
| Christian Year. A. D. | Begins on the new moon occurring next before the 1st Visakha of the Sidereal year. Kaliyug. | Samvat. | Fasli of Upper India. | Begins on the 1st of the lunar month Aswin. Character of the year, and initial of *Adhik* or 'found' month, in intercalary year. (See p. 175.) | Date of the last mean conjunction of ☉ and ☽ whence the new luni-solar year commences. New Style. | Same date in Hindú Sidereal month Chaitra. (civ. acct.) | Number of days in the Sidereal month Chaitra. | Buddhist Era of India, Ceylon, Ava, Siam, etc. | Burmese Vulgar Era (used also in Arracan, etc.) | Chinese Era. Year of the Cycle of 60. | Approximate commencement from the new moon next before ☉ enters ♓ in new style. | Years in which intercalary months are introduced. | |
| 1850 | 4951 | 1907 | 1258 | A.V. | We. 13 Mar. | 2 | 31 | 2393 | 1212 | 47 | 11 Feb. | | |
| 1851 | 4952 | 1908 | 1259 | | Tu. 1 Apr. | 21 | 31 | 2394 | 1213 | 48 | 1 Feb. | * | |
| B.1852 | 4953 | 1909 | 1260 | A.B. | Sa. 20 Mar. | 9 | 30 | 2395 | 1214 | 49 | 19 Feb. | | |
| 1853 | 4954 | 1910 | 1261 | | Fr. 8 Apr. | 28 | 30 | 2396 | 1215 | 50 | 8 Feb. | | |
| 1854 | 4955 | 1911 | 1262 | | We. 29 Mar. | 18 | 31 | 2397 | 1216 | 51 | 29 Jan. | * | |
| 1855 | 4956 | 1912 | 1263 | A.S. | Su. 18 Mar. | 6 | 30 | 2398 | 1217 | 52 | 16 Feb. | | |
| B.1856 | 4957 | 1913 | 1264 | | Sa. 5 Apr. | 25 | 30 | 2399 | 1218 | 53 | 6 Feb. | | |
| 1857 | 4958 | 1914 | 1265 | | We. 25 Mar. | 14 | 30 | 2400 | 1219 | 54 | 25 Jan. | * | |
| 1858 | 4959 | 1915 | 1266 | A.J. | Mo. 15 Mar. | 4 | 31 | 2401 | 1220 | 55 | 13 Feb. | | |
| 1859 | 4960 | 1916 | 1267 | | Su. 3 Apr. | 22 | 30 | 2402 | 1221 | 56 | 3 Feb. | | |
| B.1860 | 4961 | 1917 | 1268 | A.C. | Th. 22 Mar. | 11 | 30 | 2403 | 1222 | 57 | 23 Jan. | * | |
| 1861 | 4962 | 1918 | 1269 | A.C. | We. 10 Apr. | 30 | 30 | 2404 | 1223 | 58 | 10 Feb. | | |
| 1862 | 4963 | 1919 | 1270 | | Su. 30 Mar. | 19 | 31 | 2405 | 1224 | 59 | 30 Jan. | * | |
| 1863 | 4964 | 1920 | 1271 | A.S. | Fr. 20 Mar. | 8 | 30 | 2406 | 1225 | 60 | 18 Feb. | | |
| B.1864 | 4965 | 1921 | 1272 | | We. 6 Apr. | 26 | 30 | 2407 | 1226 | 1 | 7 Feb. | | |
| 1865 | 4966 | 1922 | 1273 | | Mo. 27 Mar. | 16 | 30 | 2408 | 1227 | 2 | 27 Jan. | * | |
| 1866 | 4967 | 1923 | 1274 | A.A. | Fr. 16 Mar. | 5 | 31 | 2409 | 1228 | 3 | 14 Feb. | | |
| 1867 | 4968 | 1924 | 1275 | | Th. 4 Apr. | 23 | 30 | 2410 | 1229 | 4 | 4 Feb. | | |
| B.1868 | 4969 | 1925 | 1276 | | Mo. 23 Mar. | 12 | 30 | 2411 | 1230 | 5 | 24 Jan. | * | |
| 1869 | 4970 | 1926 | 1277 | A.V. | Sa. 13 Mar. | 2 | 30 | 2412 | 1231 | 6 | 11 Feb. | | |
| 1870 | 4971 | 1927 | 1278 | | Fr. 1 Apr. | 21 | 31 | 2413 | 1232 | 7 | 1 Feb. | * | |
| 1871 | 4972 | 1928 | 1279 | A.B. | Tu. 21 Mar. | 9 | 30 | 2414 | 1233 | 8 | 19 Feb. | | |
| B.1872 | 4973 | 1929 | 1280 | | Mo. 8 Apr. | 28 | 30 | 2415 | 1234 | 9 | 9 Feb. | | |
| 1873 | 4974 | 1930 | 1281 | | Fr. 28 Mar. | 17 | 31 | 2416 | 1235 | 10 | 28 Jan. | * | |
| 1874 | 4975 | 1931 | 1282 | A.S. | We. 18 Mar. | 7 | 31 | 2417 | 1236 | 11 | 16 Feb. | | |
| 1875 | 4976 | 1932 | 1283 | | Tu. 6 Apr. | 25 | 30 | 2418 | 1237 | 12 | 6 Feb. | | |
| B.1876 | 4977 | 1933 | 1284 | | Sa. 25 Mar. | 14 | 30 | 2419 | 1238 | 13 | 26 Jan. | * | |
| 1877 | 4978 | 1934 | 1285 | A.J. | We. 14 Mar. | 3 | 31 | 2420 | 1239 | 14 | 12 Feb. | | |
| 1878 | 4979 | 1935 | 1286 | | Tu. 2 Apr. | 22 | 31 | 2421 | 1240 | 15 | 2 Feb. | | |
| 1879 | 4980 | 1936 | 1287 | A.C. | Su. 23 Mar. | 11 | 30 | 2422 | 1241 | 16 | 23 Jan. | * | |
| B.1880 | 4981 | 1937 | 1288 | | Sa. 10 Apr. | 30 | 30 | 2423 | 1242 | 17 | 11 Feb. | | |
| 1881 | 4982 | 1938 | 1289 | | We. 30 Mar. | 19 | 31 | 2424 | 1243 | 18 | 30 Jan. | * | |
| 1882 | 4983 | 1939 | 1290 | A.S. | Su. 19 Mar. | 7 | 30 | 2425 | 1244 | 19 | 17 Feb. | | |
| 1883 | 4984 | 1940 | 1291 | | Sa. 7 Apr. | 26 | 30 | 2426 | 1245 | 20 | 7 Feb. | | |
| B.1884 | 4985 | 1941 | 1292 | | Th. 27 Mar. | 16 | 30 | 2427 | 1246 | 21 | 28 Jan. | * | |
| 1885 | 4986 | 1942 | 1293 | A.A. | Mo. 16 Mar. | 5 | 31 | 2428 | 1247 | 22 | 14 Feb. | | |
| 1886 | 4987 | 1943 | 1294 | | Su. 4 Apr. | 23 | 30 | 2429 | 1248 | 23 | 4 Feb. | | |
| 1887 | 4988 | 1944 | 1295 | | Th. 24 Mar. | 12 | 30 | 2430 | 1249 | 24 | 24 Jan. | * | |
| B.1888 | 4989 | 1945 | 1296 | A.V. | Tu. 13 Mar. | 2 | 30 | 2431 | 1250 | 25 | 13 Feb. | | |
| 1889 | 4990 | 1946 | 1297 | | Su. 31 Mar. | 20 | 31 | 2432 | 1251 | 26 | 31 Jan. | * | |
| 1890 | 4991 | 1947 | 1298 | A.B. | Fr. 21 Mar. | 9 | 30 | 2433 | 1252 | 27 | 19 Feb. | | |
| 1891 | 4992 | 1948 | 1299 | | Th. 9 Apr. | 28 | 30 | 2434 | 1253 | 28 | 9 Feb. | | |
| B.1892 | 4993 | 1949 | 1300 | | Mo. 28 Mar. | 17 | 30 | 2435 | 1254 | 29 | 29 Jan. | * | |
| 1893 | 4994 | 1950 | 1301 | A.S. | Sa. 17 Mar. | 6 | 31 | 2436 | 1255 | 30 | 15 Feb. | | |
| 1894 | 4995 | 1951 | 1302 | | Th. 5 Apr. | 24 | 30 | 2437 | 1256 | 31 | 5 Feb. | | |
| 1895 | 4996 | 1952 | 1303 | | Tu. 26 Mar. | 14 | 30 | 2438 | 1257 | 32 | 26 Jan. | * | |
| B.1896 | 4997 | 1953 | 1304 | A.J. | Sa. 14 Mar. | 3 | 30 | 2439 | 1258 | 33 | 13 Feb. | | |
| 1897 | 4998 | 1954 | 1305 | | Fr. 2 Apr. | 22 | 31 | 2440 | 1259 | 34 | 2 Feb. | | |
| 1898 | 4999 | 1955 | 1306 | A.C. | Tu. 22 Mar. | 10 | 30 | 2441 | 1260 | 35 | 22 Jan. | * | |
| 1899 | 5000 | 1956 | 1307 | | Mo. 10 Apr. | 29 | 30 | 2442 | 1261 | 36 | 10 Feb. | | |
| 1900 | 5001 | 1957 | 1308 | | Sa. 31 Mar. | 19 | 31 | 2443 | 1262 | 37 | 1 Feb. | | |

LXXVII. Cycle.

* The Burmese and the Ceylonese luni-solar years commence on the same day as the Hindú, being derived from the same original authorities.

A special work on Muhammadan dates has lately been produced by Herr Joh. Von Gumpach (Madden, 1856), which I have duly examined for the purpose of testing Prinsep's previously-published results. Prinsep's Tables, it will be seen, are calculated from the initial date of the 16th of July, 622, A.D., while Gumpach commences from the 15th of that month.[1]

Prinsep continues to follow the Julian style up to A.D. 1750, while Gumpach introduces the Gregorian kalendar from A.D. 1582.

The tables are, therefore, uniform in their several correspondents from A.H. 1 to A.H. 990 = Julian, 1582 (26th or 25th of January, as the optional initial day may determine). Thereafter there is a uniform discrepancy of nine days between the two serial calculations,

[1] [The following is M. Gumpach's statement determining the selection of the initial date for his tables]:—'The common era of the Mahometans, as has already been stated, is that of the flight of Mahomet (تاريخ الهجرة the era of the Flight = Hegira). Its origin is by the Mahometans themselves referred to two distinct days; not that there is in reality a difference of opinion among them as to the true date, but that its epoch is fixed upon two principles, according to the astronomical or the civil view of the case. The majority of astronomers make it a Mahometan Thursday, = 15 Thamuz 933 A.S., or the moment of sunset on our Wednesday, the 14th July (old style) 622 A.D., so that the 1st of Muharram of the first year of the Hegira would mainly coincide with our Thursday, the 15th July, 622 A.D., according to the Julian kalendar. The majority of historical writers, on the contrary, place it a day later. All are in the habit of including in their expression of dates the corresponding day of the week, and thus not only obviate the uncertainty, which otherwise would attach to such dates, but, at the same time, afford a ready means of ascertaining the principle adopted, with regard to the epoch of the era, by each individual writer. Whenever the Turks express a date according to their solar kalendar, they commonly name the lunar year of the Hegira, including the 1st of March or the epoch of the solar year, to which that date belongs. . . . As will be seen on reference to the tables, the 1st of Muharram of the first year of the Hegira has been made to coincide, not with Friday the 16th, but with Thursday the 15th July, 622 A.D.; or, astronomically speaking, the epoch of the Hegira has been referred to the moment of sunset, not on Thursday the 15th, but on Wednesday the 14th July, 622 A.D. For a twofold reason. In the first place, it is in itself a matter of indifference which of the two dates be chosen for the basis of our tables, inasmuch as both are in use among Mahometan writers; the week-day, as has already been observed, frequently being the only criterion for the true reduction of a given date. In the second place, whilst the Thursday is adopted by the far greater majority of Mahometan astronomers, and thus has usually to be taken in the reduction of astronomical dates, its tabular use, at the same time, is more convenient to the layman, because it simplifies the conversion of civil and religious dates, which are mostly based on the Friday as the epoch of the Mahometan era. Two Christian dates are assigned to the 1st Muharram of the year 990 of the Hegira, namely: 'J. 1582, 25th January,' and 'G. 1582, 4th February.' The former is to be taken when, in the year 1582 A.D., the given Mahometan date falls previous to the 5th October; the latter, when it falls subsequent to the 14th October. The reason is, that our tables are computed according to the Julian kalendar or old style, up to the 4th October, 1582 A.D., inclusive, and according to the Gregorian kalendar or new style, since its introduction in that year, when ten days were passed over, and, the 4th October (corresponding to the 16th Ramazan 990 A.H.), being a Thursday, the next day, a Friday (corresponding to the 17th Ramazan), was accounted, not the 5th, but the 15th October, 1582, A.D., the usual succession of the week-days being preserved.'

consisting of the ten days passed over between the Julian and Gregorian styles, minus the one day initial difference, until A.H. 1112 = A.D. 1700, when the apparent difference increases to ten days,[1] the days of the week, however, continuing to correspond in their previous relative degree; and this divergence necessarily remains until A.H. 1166 = A.D. 1752, when the discrepancies are reconciled, and the Hijra year is made by Prinsep, under the new series, to commence on the 8th of November, being the fourth day of the week; and by Gumpach, on the 7th of November, corresponding with the third day of the week.

[1] 'The difference between the Old and the New Style up to the year 1699 was only ten days, after 1700 it was eleven days.' 'Chronology of History,' Sir Harris Nicholas, p. 35.

# GENEALOGICAL TABLES.

THE purpose of the present division of our Appendix is by no means to attempt any improvement, nor even a critical adjustment, of the catalogues of princes preserved in the legendary records of the Bráhmans, but merely to afford a succinct synopsis of the principal ancient and modern dynasties of India, and of the neighbouring countries, for reference as to names, and, where accessible, as to dates.

For the early or mythological history of the Hindús, little can be done beyond enumerating the mere names, and marking the few variations in the lists of Sir Wm. Jones, Wilford, Bentley, Hamilton, Wilson, and, latterly, Col. Tod, who have endeavoured, successively, to trace the parallelism of the solar and lunar races, and assign to them more probable dates than those extravagantly put forth in the 'Puráṇas.' As the regular succession from father to son is given in them, it was not a difficult task to apply the ordinary term of human generation, derived from the authentic histories of other countries, to the adjustment of the Hindú Chronology. Thus Ráma in the solar line, who is placed by the Bráhmans between the silver and brazen ages (867102 B.C.), was brought down by Sir Wm. Jones to B.C. 2029, and reconciled with the Ráma of Scripture; Pradyota, of the lunar race, in whose reign the last Buddha appeared, was brought down to B.C. 1029, the assumed epoch of Śákya in Tibet and China; and Nanda to 699, etc. In the case of the Magadhá Rájas this adjustment was the more easy, because the length of each dynasty is given in reasonable terms from Jarásandha, the contemporary of Yudhiṣṭhira, downwards; and the error might be only in the wrong assumption of the initial date, the epoch of the Kalí Yuga, which the pandits allotted to the year 3101 B.C. After the discovery of the identity of Chandra Gupta with Sandracottus, pointed out by Sir Wm. Jones ('As. Res.', vol. iv. p. 26), and followed up by Wilford (vol. xv. p. 262), a further

reduction of 250 years in the position assigned to him in Sir William's first list became necessary; and the diminished rate of generations, applied backwards, brought Yudhisṭhira, and his contemporaries Arjun, Krishṇa, and Jarásandha, within the twelfth or thirteenth century before Christ. A most satisfactory confirmation of the modified epochs of Nanda, Chandra Gupta, and Aṣoka has been since derived from the chronological tables of the Buddhists in Ava, published in Crawfurd's Embassy, and again in those of the Ceylon princes, made known by the Honorable G. Turnour; their near concurrence with Greek history, in the only available point of comparison, reflects back equal confidence upon the epoch assigned to the founder of their religion (B.C. 544), in spite of the Chinese and Tibetan authorities, most (though not all) of which place Buddha 500 years earlier. It was this that misled Sir Wm. Jones in the epoch of Pradyota.

There are some discrepancies in the Burmese tables difficult to be explained, such as the placing of Ajátasatru 80 years prior to Ṣiṣunága, and the occurrence of Chandra Gupta still 50 years too soon: but we must refer those who would investigate this, and all other branches of the intricate subject of Hindú and Bauddha chronology, to the learned authors we have above mentioned, satisfying ourselves here with exhibiting a comparative table of the gradual changes effected by the progress of research in a few of the principal epochs.

| Names. | Puránic date. | Jones. | Wilford. | Bentley. | Wilson. | Tod. | Burmese list. |
|---|---|---|---|---|---|---|---|
| | B.C. | B.C. | B.C. | B.C. | B.C. | B.C. | B.C. |
| Ikshwáku and Buddha | 2183102 | 5000 | 2700 | 1528 | — | 2200 | — |
| Ráma | 867102 | 2029 | 1360 | 950 | — | 1100 | — |
| Yudhisṭhira | 3102 | | | 576 | 1430 | | |
| Sumitra and Pradyota | 2100 | 1029 | 700 | 119 | 915 | — | 600 |
| Ṣiṣunága | 1962 | 870 | 600 | — | 777 | 600 | 472 |
| Nanda | 1600 | 699 | — | — | 415 | — | 404 |
| Chandragupta | 1502 | 600 | 350 | — | 315 | 320 | 392 |
| Aṣoka | 1470 | 640 | — | — | 250 | — | 330 |
| Balin | 908 | 149 | — | — | 21 | 10 | — |
| Chandrabija the last of Magadhá Rájás | B.C. 452 | 300 A.D. | — | — | 428 A.D. | 546 A.D. | |

The aid of astronomy has been successfully called in to fix such epochs as afforded the requisite data; thus the situation of the equinoctial colure in the time of the astronomer Paráṣara, who flourished under Yudhisṭhira, is fixed by Davis in 1391 B.C.; by Sir Wm. Jones, Colebrooke, and Bentley, in 1180; which latter closely accords with the epoch of the Cycle of Paraṣuráma, used in the Dakhan, and ap-

parently unknown to these authors, B.C. 1176. Bentley, on another occasion, alters this date to 575 B.C.! he also places Ráma in 950 B.C.; but there is great uncertainty and incongruity in many of his determinations of the dates of native princes and of books, from the prejudices he exhibits, although he is entitled to every confidence in his ingenious mode of calculating the period at which the various improvements in astronomy were introduced, and the 'Siddhántas' written or revised, by the time when the positions of the planets, as assigned by their tables, accorded best with the more accurate results of European astronomy. From the minimum errors, and the precession of the equinoxes (first applied to such a purpose by Sir Isaac Newton), we have the following epochs substantially ascertained :—

| | B.C. | |
|---|---|---|
| Invention of the Nakshatras or Hindú Lunar mansions | 1425 | B. |
| The Mahábhárat war, according to Wilford | 1367 | |
| The Solar Zodiac formed by Parásara (under Yudhisthira) | 1180 | |
| Era of Parasuráma commences (see page 158) 7th August | 1176 | |
| A Lunar Cycle invented, and precession discovered (Ráma?) | 945 | B. |
| Four Yugas, founded on Jupiter's motions | 215 ? | B. |
| | A.D. | |
| Seven Manwantaras, founded on Saturn's revolutions | 31 ? | B. |
| The 'Rámáyana,' written by Valmíki | 291 ? | B. |
| Varáha Mihira, flourished, according to Telugu astronomers (also according to Sir W. Jones, Colebrooke, etc., from precession of the equinoxes) | 499 | |
| Tables of the 'Brahmá Siddhánta,' fixation of the sidereal Zodiac, and new system of Chronology, with extravagant antiquity, compiled) | 538 | B. |
| The 'Mahábhárat,' written from Krishna's janampatra | 600 ? | B. |
| The Javanese translation of ditto, according to Raffles, in | 1079 | |
| Vishnu Puráṇa, whence genealogies of Andhra kings, 4955 K.Y., or | 954 | W. |
| Origin of the Kala Chakra, or Jovian Cycle (see prec. sect. p. 159) | 965 | |
| Tables of the 'Surya Siddhánta,' by Varáha Mihira | 1068-91 | B. |
| The 'Varíha Sanhita,' supposed by the same author, gives its own date | 1049 | |
| The 'Lilávati' of Bháskar Acharya bears its own date | 1088[1] | |
| The 'Bhásvatis' of Satananda, pupil of Varáha, Saka 1021 | 1109 | |
| The 'Bhágavat,' supposed by Colebrooke to be written by a grammarian in | 1200 | |
| The 'Arya Siddhánta,' compiled by Arya Bhatta | 1322 | |
| Gangadhar's Comment on Bháskar Acharya | 1420 | |
| The Works of Kesava | 1440 | |
| The 'Graha Lághava,' by Gonesh, his son | 1520 | |

Mr. Bentley would rob the seven last of a few centuries upon very insufficient grounds; he also ventures to place the authorship of the 'Rámáyana' in A.D. 291, and that of the 'Mahábhárata' in A.D. 600, on far too slender astronomical data: but his mania for modernizing

[1] [This should be 1150. Bháskar's own date being 1072 Saka = A.D. 1150. Colebrooke's 'Arithmetic and Algebra of the Hindús.' Introduction ii. H. H. W.]

renders his testimony of the advanced knowledge of the Hindús in astronomy, at so remote a period as the fifteenth century before Christ, the more valuable; and we can have little hesitation in giving credit to the lines of princes assigned to this space, and even to further antiquity, although their history has been mixed up with incredible mythos, and a falsified chronology. The more moderate and rational dates preserved by the Bauddha priests would lead to a supposition that the Bráhmans had purposely antiquated theirs, to confound their rivals in the contest for ascendancy over the minds of princes and people. That they should have suspended their histories with Sumitra of the solar, and Chandrabija of the lunar line, in the fifth century, might be naturally accounted for by the predominance of the Buddhists at that period, or more probably by the destruction of the Hindú monarchies by the incursions of the Huns and Tartars. The 'Puráṇas,' or at least the prophetical supplements describing their genealogies, must have been compiled long afterwards, and the relative dates then falsified. But the principal blame in the business seems to fall upon the astronomers, who are accused of throwing back the commencement of their era: for, taking the data of the Paurániс tables, and allowing, with them, 1015 years from Yudhiṣṭhira to Nanda; and from the latter prince to Puloman 836 years (which name is identified with Poulomien of the Chinese by Wilford, and placed in the year A.D. 648), the highest estimate of the 'Bhágavat' gives 1857 B.C. for the epoch of the 'Kalí Yuga,' instead of the 3101 assigned in the astronomical works; while in the 'Brahmáṇḍa Puráṇa' it is brought down to B.C. 1775; and in the 'Váyu Puráṇa' to B.C. 1729. The Jains, it is said, adopt the still more modern epoch of 1078 B.C.; and if Anjana of Crawfurd's Burmese chronology, founder of the sacred epoch, be Arjuna, this contemporary of Yudhiṣṭhira is placed by the Bauddhas so late as 691 B.C.!

The Jains are generally also the most trustworthy authorities for the Middle Ages. To them it is asserted that Abú'l Fazl is indebted for the series of Bengal, Malwa, and other princes, published in the 'Ayín Akbarí' with every appearance of accurate detail. The 'Rája Taringini' of Kashmír also, the only Indian history of any antiquity, begins with Buddhist theogony. The Rájávali collection of genealogies is quite modern, having been compiled by Siwai Jaya Sinh, of Ambír, in 1650. Neither that nor the native bards and chroniclers, whence the valuable data for the more modern history of Hindústán were furnished to Col. Tod for his 'Annals of Rájasthán,' are to be trusted when they trace the ancestry of their princes back, and strive to connect them with the later heroes of the 'Puráṇas'; nor even to the earlier centuries of the Christian era, in which we find hardly any

of their names confirmed either by grants, coins, or by the historians of neighbouring countries.

More authentic in every respect are the copper-plate grants, dug up in many parts of India, and the Sanscrit inscriptions on columns and temples, of which many have been deciphered and published, although the subject is by no means yet exhausted.[1] Owing to a fortunate pride of ancestry, most of these records of kingly grants recite a long train of antecedent Rájas, which serve to confirm or to supply vacuities in the more scanty written records. Of the value of these to history we cannot adduce a better instance than the confirmation of the Bhupála dynasty of the Rájas of Gaur, as given by Abú'l-Fazl in the occurrence of the names of Devapála, Dhermapála, Rájápála, etc., on the several monuments at Monghir, Buddal, Dináj-pur, Amgáchi, and Sárnáth near Benares, where also the date and the Bauddha religion of the prince are manifested. It was supposed by Sir Charles Wilkins that the two first inscriptions referred to the first century of the Samvat era; but, as shewn by Mr. Colebrooke, as well as by actual date at Sárnáth, they rise no earlier than the tenth. Indeed, the occurrence of inscriptions bearing unequivocal dates, anterior to that period, is very rare. Col. Tod adduces one of the fifth century (Samvat 597) discovered near Kota. Mr. Wathen has also recently produced two of the fourth and sixth centuries, dug up in Gujarát, which confirm, or rather correct, the early records of the Saurashtra dynasty. The oldest, however, exist in Ceylon, where they have been brought to light by Captain Forbes and the Honorable Mr. Turnour: some of these, of which translations are published by the latter author in the 'Ceylon Almanac' for 1834, are ascribed, on evidence of facts mentioned in them, to the year A.D. 262; but they bear no actual date. The period most prolific of inscriptions is from the ninth to the thirteenth century, when an anxiety seems to have prevailed among the priests to possess graven records of grants from the reigning or from former sovereigns, in order probably to secure their temples and estates from spoliation or resumption in those turbulent times. One of Col. Tod's inscriptions, translated by Mr. Colebrooke, in the 'Roy. As. Soc. Trans.', vol i., expressly declares a rival grant to be futile, and derived from an unauthorized source.

The value of inscriptions, as elucidations of history, cannot better be exemplified than by the circumstance of the Burmese inscription in the Pálí character found at Gaya on the visit of the envoys from Ava in 1827, of which a translation was printed in the 'Jour. As. Soc. Beng.', vol. iii. p. 214. It records the frequent destructions and

[1] [These remarks were published in 1835 A.D.]

attempts to repair the Buddhist temple there, and the successful completion of it in the Sakaráj year 667, A.D. 1306.[1] Now Col. Tod's Rájput annals of Méwár make particular mention of expeditions to recover Gaya from the infidels in 1200-50, which might not but for this record have been capable of explanation.

Where dates are not given in inscriptions, the style of the Nágarí character will frequently serve to determine their antiquity. The cave temples of the west of India exhibit the most ancient form; the Gujarát type, above alluded to, of the fourth century, has a part connection with them, and part with an inscription at Gaya, and another on the Allahábád Láṭ; these again are linked by intervening gradations to the Tibetan alphabet, of which we know from Tibetan authors the existing Nágarí of Magadhá was taken as the basis in the seventh century. We shall soon be able to furnish a tolerably accurate palæographical series of the Devanágarí, but can here only allude to the subject. In the tenth and eleventh centuries it undergoes the modification observable on the Gaur, Sárnáth, and Shekáwati inscriptions, resembling very nearly the Bengálí type, of which it is doubtless the parent. The modern Nágarí is found on monuments of the thirteenth century, when the irruption of the Moghals prevented any further change. There is also a still earlier character on the Dihlí, Allahábád, and Tirhut Láṭs, which remains yet undeciphered; strong reasons have been advanced for its alliance to the Sanscrit group, if it contain not indeed the original symbols of that language. (See 'Jour. As. Soc.', vols. iii. iv.)

In all other countries, coins and medals have been esteemed the most legitimate archives and proofs of their ancient history. In India, little recourse to such evidence has hitherto been available. The few Hindú coins discovered have been neglected or deemed illegible. The subject is, however, now attracting more attention from the recent discovery of Bactrian and Indo-Scythic coins in great abundance in the Punjáb, bearing names hitherto quite unknown, in Greek, and on the reverse side in a form of Pehlvi character. The series is continued down to, and passes insensibly into, the purely Hindú coins of Kanauj, and some are in our possession, with Greek and Sanscrit on the same field. This very circumstance tends to bear out Col. Tod's supposition of the Kanauj princes having an Indo-Scythic origin. Yavan-asva, their progenitor, may indeed be 'the Greek Azo,' of whose coins we have so plentiful a supply.[2] The Sanscrit characters on the Kanauj coins are of the earlier type, be-

[1] Col. Burney reads the date, which is rather indistinct, 467, or A.D. 1106; but the above evidence tends to confirm the original reading.

[2] See vol. i. p. 190.

longing to the fourth or fifth century: they will soon, it is hoped, be read, and put us in possession of several new names.

Other coins, in a still more ancient character, and nearly resembling the undeciphered letters of the Láts or the cave-sculptures,[1] are dug up in the Dihlí district: they are found in company with Buddhist relics, and will, hereafter, doubtless, lead to historical information.

A third series of coins, with devices of a Bráhmaní bull, and a horseman, bears the Gaur Nágarí of the tenth century; on this several names have been made out, Bhímadeva, etc.; and on some the Persian titles of the first Musalmán conquerors are impressed.

A fourth series, with a sitting female figure, is in the modern Nágarí, and is probably the latest of the Kanauj coins. The early Muhammadan coins of Sabaktagín, Mahmúd, etc., frequently have a partial admixture of Nágarí, which will aid in locating the rest; for while this provoking dearth exists with regard to Hindú coins, we find coins with legible names and Hijra dates for the whole line of their Muhammadan conquerors, whose history is amply preserved without their aid.

One confirmation of a historical fact from numismatic aid has been remarked in the discovery of the name of Vása Deva or Bas Deo on a Sassanian coin. Ferishta states, that Bas Deo, of Kanauj, gave his daughter in marriage to Bahrám of Persia, A.D. 330:—the coin marks exactly such an alliance; but the Hindú chronicles admit no such name until, much later, one occurs in the Málwa catalogue of Abú'l-Fazl.

In the dynasties of Nepál and Assam, (at least from the middle of the seventeenth century), we have been wholly guided by coins in our possession; and it might be possible, by persevering search, to obtain from the same source the names of many Rájas antecedent to this period, which are now doubtful or wholly unknown.

From the time of the subversion of the Moghal empire in the middle of the last century, the historical train of their coins ceases to be available; all the native states having, in imitation of the English, struck their money in the name of a nominal sovereign of Dihlí, with no regard to dates, or even to the existence of the monarch; and up to the present time, we have had the names of Muhammad Sháh, Alamgír II., and Sháh 'Álam, issuing simultaneously from the native and the Company's Mint, while a second Akbar sways the pageant sceptre of the seven climes.

It must be confessed that a large field still remains open, for the re-investigation of the middle ages of Hindú history, in judicious

[1] See 'Jour. As. Soc. Beng.', vol. iii. p. 495.

hands; for independently of the new materials now before us in the numerous coins lately discovered, and in many new inscriptions, we have the aid of the foreign histories of Ceylon, Ava, Tibet, and China; we have access to the native volumes before only consulted through interested pandits; and we have Col. Tod's ample traditions and real archives of the principal portion of the Indian continent, the seat of all its important history. To say nothing of the minute and circumstantial numismatic histories of Greece and Rome, it is principally to coins that we owe the history of the Arsacidæ of Persia, through Vaillant's investigation. The Sassanian dynasty has also been illustrated from similar materials by Frœhn and De Sacy. Marsden has extended the same principle to the Muhammadan princes of Persia and India, and to some few Hindú states, in his 'Numismata Orientalia;' and its application may be still further urged in the latter line with the greater success, in proportion to the greater dearth of other materials for history, as is exemplified in the coins of the Bactrian provinces. The first thing to be done will be to expunge and lose sight of the learned but entangled accounts of Colonel Wilford and others, which, while they have confused, have frightened critics at the perplexity of the subject. The three Vikramádityas, and three Rájá Bhojas, invented to reconcile discrepancies in dates, will perhaps be found as little needed as the multiplication of Buddhas, the two principal of which are now seen by the identity of their biography to be the same personage.

Of the confirmation of the testimony of inscriptions by that of coins, we have remarkable instances in the Chandragupta and Samudragupta of Kanauj, names first discovered on the Allahábád pillar, and now fully made out, along with several others of the same dynasty, on the gold coins found in the ruins of that ancient town. In no other record have we any mention of these sovereigns,[1] who must have been several centuries anterior to Chandra Deva, the founder of the last reigning dynasty, which was overthrown by the Muhammadans.

The native dates of events, as has been already stated, are most vague and uncertain: still there are instances in which they have undergone further perplexity from their European commentators.

The looseness with which the chronology of the Paurânic genealogies has been investigated, is pointed out in Mr. Wilson's remarks on the 'Vishnu Puráṇa,' the authority whence Sir Wm. Jones' list was furnished by his pandit ('Jour. As. Soc. Beng.', vol. i. p. 437). By some mistake he gave 345 years to the Káṇwa dynasty of four Rájas, and in this he was blindly followed by Wilford and Bentley, both professing to consult the original. Now all the manuscripts examined by Mr.

[1] [See vol. i. p. 235.]

Wilson give only 45 years. Indeed, when the epoch of Chandragupta is adjusted, the periods given in this 'Puráṇa' from Paríkshit (B.C. 1400) down to the termination of the list in A.D. 436, are quite rational.

A more glaring instance of error, sanctioned, nay almost perpetuated, by the extent to which it has been spread, has originated in blindly following the authority of the pioneers of our Sanskrit researches; and it is strange that it has never been detected, that we are aware of, up to the present day. We allude to the mode of converting the Samvat of Vikramáditya into the Christian era, by subtracting 56 instead of 57, thereby inducing a constant error of one year in all dates of chronicles, deeds, and inscriptions so read. We have taken some trouble to trace the origin of this mistake from curiosity, and it shows how subject we are to rest upon the assertions of others without duly scrutinizing the data on which they may be grounded.

Vikramáditya died in the Kali Yuga year 3044, according to Wilford, whose essays in the ninth and tenth volumes of the 'Asiatic Researches' contain the fullest information on the history of the three supposed princes of this name, and of their common rival Sáliváhana. The first Samvat, therefore, concurs with the year 3045 K.Y.; and to convert the latter into the former, 3044 must be uniformly deducted. This calculation agrees with Warren's 'Kála Sankalita,' (see p. 157, and Table), also with Abú'l-Fazl's statement, that 'in the fortieth year of Akbar's reign (A.H. 1003, commencing 5th Dec. 1594, and ending 25th Nov. 1595, A.D.) there had elapsed 4696 years of the era of Yudhiṣṭhira (Kali Yuga),' making its commencement, 3101, B.C.

Also 1652 years of the era of Vikramáditya (1652-1595=57, B.C.) and 1517 years of the era of Sáliváhana (1595-1517=78, A.D.).

The Bengálí Almanacs, published at Nadiyá, give precisely the same agreement.[1] The Almanac of the Sadar Dewání, and the statements at the head of all the regulations of Government, coincide therewith: thus, the Samvat year 1877 began on the 15th March, 1820=57 years difference. If further evidence is required of the knowledge of the true era in possession of English authors, we have in Buchanan's 'Mysore,' vol. iii., p. 112:—'3786 years of the Kali Yuga had now elapsed, of which the particulars are, 3044 years of Yudhiṣṭhira,

135 years of Vikrama,
607 years of Sáliváhana,

3786 K.Y., or A.D. 685.'

[1] One Bengálí Almanac, however, printed in Calcutta, which was brought to us for comparison, had both the Samvat and Sáka era one year in defect; the Bengálí San being the only era now used in Bengál, little care is taken in regard to the rest. The Kalí Yuga, the foundation of all, was, however, correct.

Here the interval between 3044, whence the Samvat commenced, to the Sáka, is 135, or 57+58 years; (or 135—685—607=57).

Again, Dr. Hunter, in his account of the astronomical labours of Rájá Jai Sinh, dates them in '1750 Samvat, or 1693 A.D.,' making the interval 57 years.

Sir William Jones, residing in Calcutta, where the Samvat is not used, in his speculations on Hindú chronology, only alluded to the Kali Yuga. Davis, in his account of the native method of eclipse calculations, used the Saka only; but he frequently alluded to the Kali Yuga, the first year of which he correctly placed in 3101 B.C.

Whence then can the now common, nay, almost universal, application of the subtrahend 56 have proceeded? Simply from Wilford's having placed the Kali Yuga epoch in 3100, instead of 3101 B.C., in his essay expressly written to settle the eras of Vikramáditya and Sálivâhana, to which too much confidence has been given by subsequent writers. Having everywhere assumed this erroneous datum, it followed that the Samvat epoch, which he rightly placed 3044 after Yudhisthira, would concur with 3100—3044=56 B.C.[1] But whence did he get his erroneous epoch of the Kali Yuga? This also we may conjecture, having already seen him convicted, on another count, of blindly adopting Sir W. Jones' data. Sir William, in his 'Essay on Hindú Chronology' ('As. Res.' vol. ii., p. 126), says, '4888 years of the Kali Yuga are passed up to the present time;' and his table of comparative epochs is calculated from 1788, A.D., leaving an obvious difference of 4888—1788=3100, B.C., which Wilford seems to have adopted. Had he, however, looked to the heading of the article, he would have found the date 'January, 1788,' consequently the Kali Yuga year commencing in April, 1787, had not yet expired: the true difference therefore was 4888—1787=3101, or more exactly $3100\frac{3}{4}$ years; or, for the Samvat, $56\frac{3}{4}$, in the nearest round terms 57.[2] (See p. 157.)

Wilford is not the only author who was thus led to adopt the wrong equation. Colebrooke and Wilson always use 56. Jervis's Chronological Tables have the same intercal; and Colonel Tod employs it throughout his voluminous chronicles of the Rájputs, thereby throwing all his events forward one year, excepting such as fall in the

[1] In a previous part of the very same volume, p. 47, Wilford had used 57. In some places he makes the epoch of the Kali Yuga 3001 instead of 3101.

[2] There is another advantage in adhering to the difference 57 in general terms rather than the now correcter number, $56\frac{3}{4}$, namely, that before the year 1752 it was customary, in England and most parts of Europe, to commence the year in the month of March, or on the Easter moon; so that for all dates anterior to that period the European year may be accounted to have agreed with the Hindú luni-solar reckoning precisely.

months Pausha, Mágha, Phálgun, and half of Chaitra, subsequent to A.D. 1752. He himself notices here and there a discrepancy of one year with the Mussalmán historians, which is generally attributable to this cause alone.

Captain Fell always uses the correct formula, having had access to native almanacs or to pandits. Mr. Stirling, in his 'Account of Orissa,' has the right epoch of the Kali Yuga; but he applies a wrong equation (+ 77) to the Saka era of his Orissa rájas. It is possible that this may be the mode of reckoning in that province; for we find the Saka vary a year or two also in Burmah and Java, if these variations are not indeed attributable to our English references; for, as we have seen above, they are by no means infallible!

The term Samvat does not apply exclusively to the era of Vikramáditya. Colebrooke first corrected this erroneous supposition in regard to the Saṁvat of the Gaur inscriptions, which probably commenced with the Bhupála dynasty, about 1000 A.D. Colonel Tod has also established the fact of a Balabhi Samvat in Gujarát, dating in 318 A.D., and a Siva Singha Samvat, in the same country, coinciding with 1113 A.D. This circumstance must be particularly attended to in examining ancient documents.

Kirkpatrick mentions that Raghava Deva introduced the Samvat era into Nepál; adding, that the Newár era is, however, generally used there, its origin being unknown. Now in the list of Nepál rájás, from Hara Sinha Deva, A.D. 1323, back to Raghava Deva, there are but three reigns of extravagant lengths, viz., of 88, 85, and 80 years: if these be cut down to the usual average, the date of Raghava will fall about 880, which is the epoch of the Newár era, so that in all probability the term Samvat in this case merely applied to the latter era, and not to that of Vikramáditya.

It is frequently the custom in eastern authors to estimate dates backwards from the epoch of the writer or compiler. Thus, in the Buddhist chronology of Tibet, translated in M. Csoma's 'Tibetan Grammar,' we find, 'from the incarnation of Shákya 2647 years,' meaning anterior to A.D. 1686. In these cases, and particularly where time is estimated in cycles, great caution is necessary in fixing the initial date, and it is not improbable that from this source has arisen much of the confusion of Hindú chronology; as, for instance, from throwing back the origin of the Kála-chakra system, or Jovian cycle of sixty years, which is traced (see page 161) to the year A.D. 965, as far as regards its introduction into India. Individual inaccuracies are hardly to be wondered at where events are chiefly chronicled from after-recollection. Thus the bard Chand is 100 years out in one place, according to Tod. Amír Khán's 'Biography' is one year out for a

long period, and endless instances of the same inaccuracy might be adduced. The Muhammadans are generally very particular in their dates, and so are the Hindús where they inscribe a deed on brass;—in this case they frequently allude to some eclipse or full moon, the act of donation being more pious for its occurrence on a religious festival.

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It is hardly necessary to enumerate the authorities for the different catalogues to which we may now proceed, since they will be mentioned under each dynasty: but it may be as well to premise that *A. A.* against a name or date denotes Ayín-i-Akbarí; *F.*, Ferishta's history; *J.*, Jones; *Wd.*, Wilford; *B.*, Bentley; *T.*, Tod; *H.*, Hamilton; and *W.*, Wilson.

All dates have, for uniformity sake, been expressed in Christian years, which can readily be converted into the various native reckonings by the rules given in page 172.

As a convenient preface to the mythological catalogues of the Solar and Lunar dynasties, a tabular sketch of the Hindú Theogony, with a few additional memoranda regarding their sacred works, etc., have been inserted. For more ample details on this subject, Moore's 'Hindú Pantheon,' and Coleman's 'Mythology,' or the standard work of Ward on the Hindús, may be consulted; while, for the Puránic genealogies at length, the elaborate tables published by Dr. Hamilton, at Edinburgh, in 1819, although inconveniently expanded in dimensions, will be found the most complete and authentic reference. The tables of Sir William Jones, Wilford, and Bentley, in the 'Asiatic Researches,' have the addition of dates; but, as before remarked, these are hardly admissible in the earlier periods of fabulous history.

In regard to the tables of the Muhammadan sovereigns, it has been thought sufficient, as their history is so readily accessible, to insert merely their names and titles at length, to facilitate the identification of coins, etc., where frequently only a part of the title is visible. To connect the line of these intruders into Hindústán, it was also unavoidable to carry back the list to the Persian, the Arsacidan, Syrian, and Bactrian monarchies; for, although properly speaking beyond the limits of India, their history is, from the time of Alexander, continually mixed up with that of the rich and fruitful country so constantly the prey to their invasions and plunder.

## TABLE XV.—*Hindú Theogony.*

### 1. THE INFINITE ALMIGHTY CREATOR, OF THE VEDAS, BRAHM.

| | | | |
|---|---|---|---|
| The Hindú Trinity, or Trimurti ... | Bramhá. | Vishnu. | Siva. |
| Their consorts ..... | Saraswatí, Sakti, or Máyá. | Lakshmí, Padmá, or Srí. | Párvatí, Bhawání, or Durgá |
| Their attributes ..... | Creator. | Preserver. | Destroyer. |
| Their attendant vahan, or vehicle | Hansa, a goose. | Gáruda, bird. | Nandi, bull. |
| Their symbols..... | Time. | Water. | Fire. |
| Their stations..... | Meru. | The Sun. | Jupiter. |
| Their common titles, A U M..... | Paraméswara. | Narâyana. | Mahádeva. |
| Figure under which they are worshipped ..... | Mentally. | Sáligrám and 9 Avatáras. | The Lingam, under his million epithets. |
| Analogues in Western Mythology... | Saturn. | Jupiter. | Jupiter. |

### 2. OTHER MEMBERS OF THE HINDÚ PANTHEON, AND THEIR SUPPOSED ANALOGUES IN WESTERN MYTHOLOGY, ACCORDING TO SIR WILLIAM JONES.

| | | | |
|---|---|---|---|
| Sareswati..... | Minerva, patroness of learning, etc. | Vaitarini ..... | The river Styx. |
| Ganesa..... | Janus, god of wisdom. | Durgá ..... | Juno. |
| Indra ..... | Jupiter, god of firmament. | Náreda..... | Mercury, music. |
| Varuna ..... | Neptune, god of water. | Krishna ..... | Apollo. |
| Prithivi ..... | Cybele, goddess of earth. | Bhawání ..... | Venus. |
| Viswakarma.. | Vulcan, architect of gods. | Kálí or Durgá | Proserpine. |
| Kártikeya, or Skanda ... | Mars, god of war. | Agni..... | Vulcan, fire. |
| Káma ..... | Cupid, god of love. | Swáhá ..... | Vesta (his wife). |
| Surya, or..... | Sol, the sun. | Aswini-kumára ..... | Castor and Pollux. |
| Arka ..... | Mithra, the same. | Aruna ..... | Aurora. |
| Hanumán, son of Pavana.. | Pan, the monkey god. | Atavideva..... | Diana. |
| Ráma ..... | Bacchus, the god of wine. | Kuvera..... | Plutus, god of riches. |
| Yama ..... | Pluto or Minos. | Gangá ..... | The river Ganges. |
| Heracula..... | Hercules. | Váyu ..... | Æolus. |
| Aswiculapa ... | Æsculapius? (genii). | Srí ..... | Ceres. |
| | | Anna Purna... | Anna Perenna. |

### 3. THE TEN BRAHMÁDICAS, CHILDREN OF BRAHMÁ, OR PRAJÁPATIS, LORDS OF CREATED BEINGS.

| | | | | | |
|---|---|---|---|---|---|
| 1 | Maríchí..... | Morality. | 6 | Kritu..... | Piety. |
| 2 | Atri ..... | Deceit. | 7 | Daksha ..... | Ingenuity. |
| 3 | Angirasa ..... | Charity. | 8 | Vasishtha ..... | Emulation. |
| 4 | Pulastya ..... | Patience. | 9 | Bhrígu ..... | Humility. |
| 5 | Pulaha ..... | Pride. | 10 | Nárada ..... | Reason. |

### 4. THE SEVEN MENUS OF THE PRESENT CREATION.

| | | | |
|---|---|---|---|
| 1 | Swayambhuva, Adam? 4006, B.C. | 5 | Raivata. |
| 2 | Swárochesha. | 6 | Chackshusha. |
| 3 | Uttama. | 7 | Vaivaswata or Satyavrata, Noah? 2950, B.C. |
| 4 | Támasa, Chaos, Thaumaz of Egypt.? | | |

### 5. THE SEVEN RÍSHIS, SPRUNG DIRECT FROM BRAHMÁ.

| | |
|---|---|
| 1 Kasyapa, Muni. | 5 Gautama. |
| 2 Atri, Muni. | 6 Jamadagni. |
| 3 Vasishtha. | 7 Bharadwája. |
| 4 Visvamitra. | |

### 6. THE TEN AVATÁRAS, OR INCARNATIONS OF VISHNU.

| | | | |
|---|---|---|---|
| 1 | Matsya ..... | The fish. | |
| 2 | Kurma ..... | The tortoise. | |
| 3 | Váráha ..... | The boar. | |
| 4 | Narasinha ... | The lion. | |
| 5 | Vámana..... | The dwarf. | |
| 6 | Parasurâma . | Son of Jamadagni. | |
| 7 | Ráma..... | Of the solar race. | |
| 8 | Krishna ... | Of the lunar race. | |
| 9 | Buddha ... | Of the Buddhists. | |
| 10 | Dharma-bhushana or Kalki-avatár, to appear at the close of the Kalí Yuga. | | |

### 7. THE ELEVEN RUDRAS, OR FORMS OF SIVA.

| | | | |
|---|---|---|---|
| 1 | Ajaikapáda..... | The names are differently given in the 'Bhágavat.' | ——— |
| 2 | Ahivradhna..... | | ——— |
| 3 | Virupáksha..... | | ——— |
| 4 | Sureśwara ..... | | Mohana. |
| 5 | Jayanta ..... | | Bama. |
| 6 | Bahurúpa ..... | | ——— |
| 7 | Tryambaka..... | | Bhawa. |
| 8 | Aparájita..... | | Aja. |
| 9 | Savrita..... | | Rawati. |
| 10 | Hara ..... | | Ugra. |
| 11 | Isha..... | | Bhíma. |

### RUDRAS ACCORDING TO THE HARIVANSA.

| | | |
|---|---|---|
| 1 | Mrigavyádha. | |
| 2 | Sarwa. | |
| 3 | Nirriti. | |
| 4 | Ajekapád. | |
| 5 | Ahirvradhna. | |
| 6 | Pinákin. | |
| 7 | Aparájita. | |
| 8 | Havana. | |
| 9 | Iswara. | |
| 10 | Kapálin. | |
| 11 | Sthánu. | |
| 12 | Bhava. | (J.P.) |

### 8. THE EIGHT VASUS; A KIND OF DEMI-GOD.

| | |
|---|---|
| 1 Dhava. | 5 Anila, or wind. |
| 2 Druva. | 6 Anala, or fire. |
| 3 Soma, the moon. | 7 Prabhúsha. |
| 4 Vishnu. | 8 Prabhava. |

### 9. THE TEN VISHWAS, A CLASS OF DEITY WORSHIPPED IN FUNERAL OBSEQUIES.

| | |
|---|---|
| 1 Vasu. | 6 Káma. |
| 2 Satya. | 7 Dhriti. |
| 3 Kratu. | 8 Kuru. |
| 4 Daksha. | 9 Pururava. |
| 5 Kála | 10 Madrava. |

### 10. THE EIGHT DIKPÁLAS, GUARDIANS, AND THE EIGHT DIKPATIS, LORDS, OF THE CARDINAL POINTS.

| | | |
|---|---|---|
| 1 | Indra..... | East. |
| 2 | Agni (or Vahni) ..... | South-east. |
| 3 | Yama..... | South. |
| 4 | Nairrita ..... | South-west. |
| 5 | Varuna ..... | West. |
| 6 | Marut (Vayu, Pavan).. | North-west. |
| 7 | Kuvera ..... | North. |
| 8 | Isána (Prithivi) ..... | North-east. |

| | | |
|---|---|---|
| 1 | Surya..... | The Sun. |
| 2 | Sukra..... | Venus. |
| 3 | Mangala ..... | Mars. |
| 4 | Ráhu..... | Asc. node. |
| 5 | Sani ..... | Saturn. |
| 6 | Chandra ..... | The Moon. |
| 7 | Buddha..... | Mercury. |
| 8 | Vrihaspati..... | Jupiter. |

11. THE TWELVE ÁDITYAS; MONTHLY NAMES OR EMBLEMS OF THE SUN.

| | | | |
|---|---|---|---|
| 1 | Varuna. | 7 | Gabhasti. |
| 2 | Surya. | 8 | Yama. |
| 3 | Vedanga. | 9 | Swarnareta. |
| 4 | Bhánu. | 10 | Divakara. |
| 5 | Indra. | 11 | Mitra. |
| 6 | Ravi. | 12 | Vishṇu. |

ÁDITYAS, ACCORDING TO THE HARIVANSA.

| | | | |
|---|---|---|---|
| 1 | Dhátri. | 7 | Indra. |
| 2 | Aryaman. | 8 | Visaswán. |
| 3 | Mitra. | 9 | Puchan. |
| 4 | Varuna. | 10 | Twashtri. |
| 5 | Ansa. | 11 | Savitri. |
| 6 | Bhaga. | 12 | Vishṇu. |

12. THE TWENTY-SEVEN NAKSHATRAS, DAUGHTERS OF DAKSHA, OR LUNAR MANSIONS.

| | | | | | |
|---|---|---|---|---|---|
| 1 | Aswini. | 10 | Maghá. | 19 | Múlá. |
| 2 | Bharani. | 11 | Purva Phálguni. | 20 | Purva Ásárha. |
| 3 | Kritika. | 12 | Uttara Phálguni. | 21 | Uttara Ásárha. |
| 4 | Rohini. | 13 | Hasta. | 22 | Sravana. |
| 5 | Mrigasira. | 14 | Chitra. | 23 | Dhaneshtha. |
| 6 | Ardra. | 15 | Swati. | 24 | Satabhisha. |
| 7 | Punarvasu. | 16 | Visákha. | 25 | Purva Bhadrapada. |
| 8 | Pushya. | 17 | Anuradha. | 26 | Uttara Bhadrapada. |
| 9 | Aslesha. | 18 | Jayeshtha. | 27 | Revati. |

13. THE NAMES OF BUDDHA.

Buddha, Sákya-muni or Sinha, Gautama, Tathágata, Mahá-sramaṇa; Saudhodani, from his father Sudhodhana; Arkabandhu, or kinsman of the Sun; Máyádevi-suta, or child of Máyá.

| | |
|---|---|
| But, of the Mussalmáns. | Pout, of Siam. |
| Buddas and Sarmanes, of the Greeks. | Sommonokodam, of ditto. |
| Mercurius Mayæ filius, of Horace. | Godama, of Ava. |
| Bud or Wud, of the Pagan Arabs. | Kshaka, of Japan. |
| Woden, of the Scandinavians. | Chakabout, of Tonquin China. |
| Toth, of the Egyptians. | Chom-dan-das, Sangs-gyas, of Tibet. |
| Fo, Foe, or Fo-hi, and Sa-ka, of the Chinese. | |

*Bauddha System of Theogony.*

Adi-Buddha, the Supreme Being, created by dhyan five divine Buddhas, who are quiescent, viz.:—

| | | |
|---|---|---|
| 1 Vairochana Akshobhya. | Each of whom produced from himself his son, or Bodhisatwa, | 1 Samanta Bhadra. |
| 2 Ratna. | | 2 Vajra Pani. |
| 3 Sambhava. | | 3 Ratna Pani. |
| 4 Amitabha. | | 4 Padma Pani. |
| 5 Amogha Siddha. | | 5 Viswa Pani. |

The Buddhist Triad, or mystic syllable A U M, is interpreted:—
A, the Vija mantra of the male Buddha, the generative power.
U, ditto of the female Dharma or Adi Prajní, the type of productive power.
M, ditto of Sanga, the union of the essences of both.

*The seven human or earth-born Buddhas.*

| | | | |
|---|---|---|---|
| 1 | Vipasya. | 5 | Kanaka Muni. |
| 2 | Sikhi. | 6 | Kasyapa, and |
| 3 | Viswa Bhu. | 7 | Sákya Sinha. |
| 4 | Karkut Chand. | | Arya Maitri, the future Buddha. |

### 14. THE TWENTY-FOUR JINAS OR TIRTHANKARAS, OF THE JAINS.

| | | Where born. | Where died. |
|---|---|---|---|
| 1 | Ádináth or Rishabhanáth ..... | Ayodhya. | Gujarát. |
| 2 | Ajitanáth..... | „ | Mt. Síkhar (hod. |
| 3 | Sambhunáth ..... | Sáwanta. | Parisnáth.) |
| 4 | Abhinandananáth ..... | Ayodhya. | „ |
| 5 | Sumatináth..... | „ | „ |
| 6 | Padmaprabhunáth ..... | Kausambhí. | „ |
| 7 | Suparswanáth..... | Benares. | „ |
| 8 | Chandraprabha ..... | Chandripur. | „ |
| 9 | Suvidhanáth or Pushpadanta ... | Kakendrapuri. | „ |
| 10 | Sitalanáth ..... | Bhadalpur. | „ |
| 11 | Srí Ansanáth ..... | Sindh. | „ |
| 12 | Vasupádya ..... | Champapurí. | Champapurí. |
| 13 | Vimalanáth..... | Kumpalapurí. | Mt. Síkhar. |
| 14 | Anantanáth..... | Ayodhya. | „ |
| 15 | Dharmanáth ..... | Ratanpurí. | „ |
| 16 | Santanáth ..... | Hastinápur. | „ |
| 17 | Kunthunáth ..... | „ | „ |
| 18 | Aranáth ..... | „ | „ |
| 19 | Mallináth ..... | Mithila. | „ |
| 20 | Munisuvrata ..... | Rájgriha. | „ |
| 21 | Nemináth ..... | Mithila. | „ |
| 22 | Namináth ..... | Dwárika. | Mt. Girinára. |
| 23 | Parswanáth..... | Benares. | Mt. Síkhar. |
| 24 | Vardhamána or Mohávíra Swámi | Chitrakot. | Pawapuri. |

### 15. THE SAPTA DWÍPAS OR DIVISIONS OF THE ANCIENT WORLD, RULED BY THE SONS OF PRIYABRATA, KING OF ANTARVEDA.

| Oldest Division. | | Newer Division. | |
|---|---|---|---|
| Jambudwípa..... | India. | Jambudwípa ... | India. |
| Angadwípa ..... | Nepal? | Plakshadwípa . | Asia Minor, W. |
| Yamadwípa ..... | Assam, Ava? | Salmalidwípa.. | Ceylon? W. |
| Yamaladwípa ..... | Malaya. | Kushadwípa ... | Assyria, Persia, etc. |
| Sankhadwípa ..... | Africa. | Karanchadwípa | Near the Baltic? W. |
| Kúshadwípa..... | Assyria. | Sákadwipa..... | Part of Kushadwipa, Britain? W. |
| Varáhadwípa ..... | Europe. | Puskaradwípa . | Part of Kushadwípa, Ireland? W. |

### 16. THE FOUR VEDAS.

| | | | |
|---|---|---|---|
| 1 | The Rig veda. | 3 | The Sáma veda. |
| 2 | The Yajur veda. | 4 | The Atharva veda. |

### 17. THE FOUR UPAVEDAS.

| | | | | | |
|---|---|---|---|---|---|
| 1 | The Ayush ..... | Medicine. | 3 | The Dhanush ..... | Warfare. |
| 2 | The Gándharva ... | Music. | 4 | The Sthápatya ... | Mechanics. |

### 18. THE SIX ANGAS, OR BODIES OF LEARNING.

| | | | | | |
|---|---|---|---|---|---|
| 1 | Siksha ..... | Pronunciation. | 4 | Chandas. | Prosody. |
| 2 | Kalpa ..... | Religious acts. | 5 | Jyotish... | Astronomy. |
| 3 | Vyákarana ... .. | Grammar. | 6 | Nirukti... | Interpretation of Vedas. |

19. THE FOUR UPÁNGAS.

| | | |
|---|---|---|
| 1 | Purâṇa ..... | History, comprising the eighteen Puráṇas. |
| 2 | Nyâya ..... | Logic, and the principles of knowledge. |
| 3 | Mímánsá ..... | Religious principles and duties. |
| 4 | Dharma shástra..... | Law, human and divine. |

20. THE EIGHTEEN PURÁṆAS.

| | | | |
|---|---|---|---|
| 1 | Brahmá-puráṇa. | 10 | Nárada. |
| 2 | Padma, or lotus. | 11 | Skanda. |
| 3 | Brahmáṇḍa, egg of Brahmá. | 12 | Márkaṇḍa. |
| 4 | Agneya, or Agni, fire. | 13 | Bhavishya, prophetic. |
| 5 | Vaishṇava, or Vishṇu-puráṇa. | 14 | Matsya, or the fish. |
| 6 | Gáruḍa, Vishṇu's bird. | 15 | Varáha, or boar. |
| 7 | Brahma-vaivartta, or transformations of Krishṇa (as the supreme). | 16 | Kúrma, tortoise. |
| 8 | Śaiva, or of Śiva. [Váyu replaces it.] | 17 | Vámana, or dwarf. |
| 9 | Linga-puráṇa. | 18 | Śrí Bhágavata, or life of Krishṇa. |

21. THE SIX PRINCIPAL SECTS OF THE HINDÚS.

| | | | |
|---|---|---|---|
| 1 | Śaiva..... | Worshippers of | Śiva, in his thousand forms. |
| 2 | Vaisnava ... | „ | Vishṇu. |
| 3 | Sauriya..... | „ | Surya, or the Sun. |
| 4 | Gánapatya... | „ | Ganesha. |
| 5 | Sacta..... | „ | Bhawání, or Párvatí. |
| 6 | Bhagavati ... | „ | Who recognize all five divinities equally. |

## PAURÁṆIC GENEALOGIES.

TABLE XVI.—*Descendants of Swáyambhuva, the first Manu, King of Brahmavarta, and progenitor of mankind (Adam? J.), according to the 'Bhágavat Puráṇa,' II.*

[Professor Wilson (Preface to 'Vishṇu Puráṇa') reviews in detail the date and authenticity of the 'Bhágavata Puráṇa;' his conclusions on these subjects may be gathered from the following quotation:—

'The statement of the text is of itself sufficient to show that, according to the received opinion of all the authorities of the priority of the eighteen Puráṇas to the Bhárata, it is impossible that the 'Śrí Bhágavata,' which is subsequent to the Bhárata, should be of the number. . . . . There does not seem to be any other ground than tradition for ascribing it to Vopadeva, the grammarian; but there is no reason to call the tradition in question. Vopadeva flourished at the court of Hemádri, Rájá of Devagiri, Deogur, or Dowlutabad, and must consequently have lived prior to the conquest of that principality by the Muhammadans in the 14th century. The date of the 12th century, commonly assigned to him, is probably correct, and is that of the 'Bhágavata Puráṇa,' p. 31.']

BRAHMÁ.

SWAYAMBHUVA.

| | |
|---|---|
| UTTÁNAPÁDA, King of Bharatkhanda. (*From whom descended the Kings of Brahmavarta.*) | PRIYAVRATA, King of Antarveda.[1] AGNÍDHRA, King of Jambudwípa. (*From whom descended the Kings of Bharatkhanda.*) |
| Dhruva. | Nábhi. |
| Vatsara. | Rishabha-deva.[2] |
| Pusparna. | Bharata. |
| Vyushta. | Vridhaséna (Sumati, 'V. P.'). |
| Sarvatajas. | Devatajit (Indrayumna). |
| Chaxusha. | Devadyumna. |
| Ulmuka. | Purmeshthi (Parameshtin). |
| Angga. | Pritiha (Pratihára). |
| Vena-adharmaraja. | Pritiharta (Pratiharttá). |
| Prithu. | Bhuma (Bhava). |
| Vijitaswa, or Antardhyana. | Udgítha. |
| Havirdhana. | Prastára. |
| Varhishata, or Prachinahvarhi. | Bibhu (Prithu). |
| Pracheta, and 9 brothers. | Prathusena. |
| Daksha Prajapati, *Among whose numerous progeny were* | Nakta. |
| 10 daughters, married to Dharma. | Gaya. |
| 13 daughters, married to Kasyapa Muni, the son of Maríchi (see Solar race), progenitors of men, animals, vegetables, etc. | Chitraratha (Nara.[3] Succession varies considerably in 'V. P.' p. 165.) |
| Daná, mother of evil genii, comets, etc. | Sumrata. |
| Dití, mother of the Daityas, or Asuras. | Maríchi (see Solar race). |
| Aditi, mother of the gods and Suras. | Binduma. |
| 27 daughters, the Nakshatras, married to the Moon. | Madhu. |
| 1 daughter, mother of the 11 Rudras, and others of less importance. | Viravrata. |
| | Manthu. |
| | Bhauvana. |
| | Twashtha. |
| | Viraja, and 100 sons, whose names are unknown. |

TABLE XVII.—*The Surya-vansa, or Solar Dynasty, collated from the lists of Jones, Wilson, Tod, and Hamilton.*

Maríchi.
Kasyapa Muni, married Aditi, Daksha's daughter (see Table XVI.).
Vivaswaṅa, or Surya, the Sun.
Sradhadeva, or Vaivaswata (the Sun), King of Ayodhya.
Ikshwaku, in the Treta Yuga.—B.C. 3500, J.—2200, T.

[1] Priyavrata was also father of Idhmajabha, King of Plaksha Dwipa; Yagyabahu, of Salmala Dwipa; Hiranyarita, of Kusa Dwipa; Ghritaprishtha, of Krauncha Dwipa; Medhatithi, of Śáka Dwipa; and Bitihotra, of Puskara Dwipa; of whom the descendants are not traced farther than the first generation.

[2] Rishabha-deva was also father of the kings of various other nations, viz.:—Kusa-warta, of Kusa-warta-des; Ila-warta, Brahmá-warta, Malaya, Ketu, Bhadraséna, Indrasprik, Bidharbha, and Kikata, of desas, or countries, bearing the same names; besides the nine immortal Siddhas,—Kabiyaga, Hari, Antarixa, Prabuddha, Pippalayana, Abirhotra, Dranila, Chumasa, and Karubhajana; also eighty-one Bráhmans, names unknown.

[3] [I do not think it necessary to continue these corrections of mere nominal lists of fabulous ages.]

*From whom sprung the two Solar Dynasties.*

OF AYODHYA (OUDE).

Vikukshi (did not reign, W.).
Kukutst'ha, or Puranjaya.
Anonas / Prit'hu } An-Prithú, T.
Viswagandhi, Visvagaswa, W.
Chandra { Ardra, T. W. / Bhadrardra, W.
Yuvanáswa.
Srúva, Svasava, H.
Vrihdas'wa.
Dhundhumara, Kuvalayaswa, W.
Drid'hás'wa.
Haryas'wa.
Nikumbha.
Cris'áswa { Varunaswa, T. H. / Sankataswa, W.
Senajit, Prasenajit, W.
Yuvanáswa, H. W. *car.* J.
Mándhátá { Suvindhu, T. / King of Saptadwípa.
Purukutsa.
Trasadasyu, *car.* T.
Anaranya.
Prishadaswa, W.
Haryas'wa, H. W.
Praruna, Aruna, H., Vosumána, W.
Trivindhana, Tridhanwa, W.
Satyavrata, Tráyaruna, W.
Suvritha, T., *car.* J. H. W.
Tris'anku.
Harischandra, King of India.
Rohita, Kohitaswa, H.
Hárita.
Champa, Chunchu, W.
Sudéva, *car.* T. W.
Vijáya (his brother; Kurm. Pur.)
Bharuca.
Vrika.
Báhuka, Bahu, W.
Sagara, had 10,000 sons.
Asamanjasa, only survivor.
Ansumán.
Dulipá, W. T. H., *car.* J.
Bhagirat'ha, brought down Ganges river.
Sruta.
Nábhaga.
Ambarisha, T. W.
Sindhudwípa.
Ayutáyush.
Ritaperna.
Nala, T. / Sawakáma, W. T. } *car.* J. H.
Saudása.
Kalmáshapáda, W. H., *car.* J. T.
Asmaka.
Múlaca, Harikavacha, W.
Das'arat'ha.
Aídabida, Ilivita, W.

OF MAITHILA (TIRHUT).

This list is imperfect in number, if the father of Sitá, the bride of Ráma, be correctly placed.

1. Nimi.
2. Janaka, built Janakpur.
3. Udvasu.
4. Nandivardhana.
5. Suketu.
6. Dewarata.
7. Vrihadratha.
8. Mahabirya.
9. Sudhrita.
10. Dhristaketu.
11. Haryaswa.
12. Maru.
13. Pratipaka.
14. Kritiratha.
15. Devamirha.
16. Visruta.
17. Mahadhriti.
18. Dhritimatu.
19. Maharoma.
20. Swarnaroma.
21. Haraswaroma.
22. Swadhaja, (Father of Sitá, who married Ráma (see the parallel line of Ayodhya.)
23. Kesidhaja.
24. Dharmadhwaja.
25. Kritadhwaja.
26. Kesidhwaja.
27. Bhanuman.
28. Satadyumna.
29. Suchi.
30. Sunadhwaja.
31. Urdhaketu.
32. Ayu.
33. Purajit.
34. Arishtanemi.
35. Srutayu.
36. Supanswaka.
37. Chitraratha.
38. Kshemadhi.
39. Samaratha.
40. Satyaratha.
41. Upa-guru.
42. Upajupta.
43. Baswananta.
44. Yugudhana.
45. Subhasana.
46. Sruta.
47. Jaya.
48. Vijaya.
49. Ritu.
50. Sunaka.
51. Bitahala.
52. Dhriti.
53. Bahulaswa.
54. Kriti.
55. Mahabasi.

AYODHYA RÁJÁS, *continued.*

Vis'wasaha.
K'hatwánga, Kharbhanga, T.
Dirghabáhu.
Raghu.
Aja.
Das'arat'ha, 2nd W.
Ráma, A.C. 2029, J., 950, B., 1100, T. — His brothers, Bharata, Lakshmana, Satroghana.

DWÁPÁR YUGA OR BRAZEN AGE.

Kusha, Lava, T.
Atithi.
Nishadha.
Nabhas, or Nala, T.
Pundarika.
Kshemadhanwas.
Dévánica, Dwarika, W.
Ah'ínagu, Ahinaja, W., Hina, H.
Kuru, W., *car.* J. H.
Páriputra.
Dala, W., Bala, H.
Rana-chhala.
Uktha, W., *car.* J. H.
Vajranabha.
Arca, *car.* W. T. H.
Sugana, Sankhanábhi, W.
Vidhrití, Vijuthitábhi, W.
Viswasaha, 2nd W., Visitaswa, T.
Hiranyanábha.
Pushpa, Pushya, H.
Dhruvasandhi, *car.* T.
Suders'ana, *car.* W.
Agniverna, Apaverma, W.
Sighra.
Manu, Maru, W. T. H.
Prasusruta.
Sandhi, Susandhi, W.
Amers'ana, Amersha, W.
Mahaswat, Avaswana, T.
Vis'wabháhu, Prasénajit, Takshaka, Vrihadbala.[1] — Viswasava, T. *car.* W.
Vrihadsan'a, B.C. 1300 J.

SOLAR LINE OF VESALA
(ALSO DESCENDED FROM SRADHA-DEVA.)

Dishta, King of Vesala.
Nabhaga.
Bhalandana.
Vatsaprité.
Prangsu.
Pramati.
Khanitra.
Chaxusha.
Bibingsati.
Rambhu.
Khanínetra, Dharmika, — *car.* Vanscláta.
Karandhâma.
Adixita.
Maruta.
Dama, Rajyavarodhana, — *car.* do.
Sudhriti.
Nara, *car.* do.
Kebala.
Dhundhumana, or Bandhuman.
Begawan, Budha, Trinavindhu,[2] — *car.* do.
Besabiraja, or Visala, who founded Vaisali (Allahábád).
Hemachandra.
Dhumraxa.
Sangyam.
Sahadeva, *car.* V. L.
Krisaswa.
Somadatta.
Sumati (ends V. L.)
Janamejaya.

[N.B.—The names which are enclosed in parentheses in the subjoined tables are not to be found in the 'Vishṇu Puráṇa.' The orthography of the leading names has generally been adopted and corrected up from that authority.

As illustrative of the probable date and authenticity of this Puráṇa, I cite Prof. Wilson's careful *résumé* of the subject:]

'The fourth book contains all that the Hindús have of their ancient history. It is a tolerably comprehensive list of dynasties and individuals; it is a barren record of events. It can scarcely be doubted, however, that much of it is a genuine chronicle

[1] ['Vishṇu Puráṇa,' p. 463.]
[2] His daughter, Brabira, married Visvarawa Muni, the father (by another wife, Nikaksha) of Rávana, the demon king of Lanka, or Ceylon, afterwards killed by Ráma.

of persons, if not of occurrences. That it is discredited by palpable absurdities, in regard to the longevity of the princes of the earlier dynasties, must be granted, and the particulars preserved of some of them are trivial and fabulous. Still there is an inartificial simplicity and consistency in the succession of persons, etc. . . . . It is not essential to its credibility or its usefulness that any exact chronological adjustment of the different reigns should be attempted. . . . . Deducting, however, from the larger number of princes a considerable proportion, there is nothing to shock probability in supposing that the Hindú dynasties and their ramifications were spread through an interval of about twelve centuries anterior to the war of the Mahábhárata, and, conjecturing that event to have happened about fourteen centuries before Christianity, thus carrying the commencement of the regal dynasties of India to about 2600 years before that date, pp. 64, 65. . . . . After the date of the great war, the 'Vishṇu Puráṇa,' in common with those Puráṇas which contain similar lists, specifies kings and dynasties with greater precision, and offers political and chronological particulars, to which, on the score of probability, there is nothing to object, pl. 70 . . . . The 'Vishṇu Puráṇa' has kept very clear of particulars from which an approximation to its date may be conjectured. No place is described of which the sacredness has any known limit, nor any work cited of probable recent composition. The Vedas, the Puráṇas, other works forming the body of Sanskrit literature, are named; and so is the Mahábhárata, to which, therefore, it is subsequent. Both Bauddhas and Jains are adverted to. It was, therefore, written before the former had disappeared; but they existed in some parts of India as late as the twelfth century at least, and it is probable that the Puráṇa was compiled before that period.'—p. 71.

[I curtail my quotations in this, as in previous instances, precisely where Prof. Wilson ceases to speak from the absolute knowledge contributed by the Sanskrit writings, of which he is *facile princeps* the exponent.]

KALI YUGA,—IRON, OR FOURTH AGE, 3101, B.C.

Urukshepa, Urukria, W.
Vatsa, W., *car.* J.
Vatsa, (vriddha) Vyúha, W.
Prativyoma.
(Bhánu, *car.* W.)
Diváкara.
Sahadeva.
(Vira, *car.* W. T.)
Vrihadaṣwa.

Bentley places these eight names immediately after Ráma.

Bhánuratha—Bhánumat, Bahman, Longimanus of Persia? T.
(Prat'icás'wa, *car.* W.)
Supratítha.
Marudeva.
Sunakshatra.
Kinnara—Pushcara.
Antarîksha, Rekha, T.
Suvarna, W. (Suta, Sutapas).
Amitrajit.
Vrihadrája.
(Barhi), Dharman, W.
Kritanjaya, first emigrant from Kosala (Oude) and founder of the Suryas in Saurâshtra, T.
Raṇanjaya.
Sanjaya.
Ṣákya, W. T. (Slocya).
Ṣuddhodana, Khroddhodana, W., Sudipa, T.
Rátula, W.[1] (Lángalada, Sangala, T.)
Prasenajit.
Kshudraka, Romika, T.
Kuṇḍaka, W., *car.* J.
Suratha, Surita, W., *car.* J.
Sumitra, B.C. 2100, J., 57, T. The last name in the 'Bhágavat Puráṇa,' said to be contemporary with Vikramáditya? T. from this prince the Mewár chronicles commence their series of Rájás of Saurâshtra (see Tab. xxvi.).

[1] [Ráhula, 'Vâyu Puráṇa;' Siddhártha or Pushkala, 'Matsya Puráṇa;' Lángala, 'Bhágavat Puráṇa.' 'This and the two preceding names are of considerable chronological interest; for Ṣákya is the name of the author or reviver of Buddhism, whose

TABLE XVIII. — *Chandra-vansa, Indu-vansa, or Lunar Race, who reigned in Antarveda and Káśi; afterwards in Magadhá (Behar), and Indraprastha (Dihli).*

| | |
|---|---|
| Atri..... | Muni. |
| Soma ..... | (Lunus, the Moon). |
| Buddha ..... | (Mercury) married Ilá, daughter of the Sun. |
| Ailas, or..... | Purúravas. |
| Ayu..... | Kings of Káśi also descended from him (see below). |
| Nahusha..... | (Devanahusha, Dionysos, Bacchus, WD.). |
| Yayati ..... | Father of Puru and Yadu (see next page). |

KINGS OF KÁŚI (BENARES).

Kshetravriddha, son of Ayu.
Subatra.
Káśi.
Káśi.
Rashtra.
Dirghatama.
Dhanwantra.
Ketumana.
Bhimaratha.
Divodása, becomes a Buddhist.
Dyamana.
Pratardan.
Ritadwaja.
Alarka.
Santati.
Sunitha.
Suketana.
Dharmaketu.
Satyaketu.
Dhrishtaketu.
Sukamara.
Bitihotra.
Bharga.
Bhargabhumi (end in 'Bhágavat P.')

LINE OF PURU.

Puru, king of Prátishthána.
Janamejaya, king of Antarveda.
Prachinwat.
Pravira.
Manasya.
Bhayada.
(Sudhyumna.)
(Bahugava.)
Samyáti.
Ahamyáti.
Raudrásva.
Riteyu, *car.* W.
Rantinára, Rantimara, W.
Tansu, W. (Sumati).
(Raibhi or Anila, *car.* W.)
Dushyanta or Dushmanta, husband of Sakuntalá.
BHARATA, king of Antarveda and India.
Vitatha, or Bharadwája, adopted.
Bhavanmanyu.
Vrihatkshatra.
Suhotra.

LINE OF YADU.

Yadu, excluded from succession.
Kroshta.
Vrijinavan.
Swáhi.
Rishadyu.
Chitraratha.
Saravindu.
Prithusravas.
Tamas, or Dharma.
Usanas.
Síteshu, Síteyas, W. *car.* H.
Ruchaka, Rukshma, W.
Kavatha, W. *car.* J.
Paráwrata, line extinct.
Jamodhya, Jyamagha, W.; from Saravindu by another line.
Vidarbha.
Krotha.
Kunti.
Drashti, Vrishni, W.
Nirvrati.
Dashárha.
Vyoma, Vijaman, W.

birth appears to have occurred in the seventh century, and death in the sixth century, B.C. (B.C. 621–543). There can be no doubt of the individual here intended, although he is out of his place, for he was the son, not the father, of Suddhodana, and the father of Ráhula, as he is termed in the Amara and Haima Koshas.' . . . . 'Vishnu Puráṇa,' p. 463.

LINE OF PURU (*continued*).

Hastin, built Hastinápur.[1]
Ajamídha, reigned at do.
Riksha, do.[2]
Samvarana.
Kuru, from whom also descended the Magadhá princes (see tab. xx. and 'V. P.', p. 455).
Parikshit, 'V. P.'
Jahnu.
Suratha.
Vidúratha.
Súrvabhauma.
Jayasena, Árávin 'V. P.'
(Radhica, Arávi, W.)
Ayutáyus, Ajita, H.
Akrodhana.
Devatithi, *car.* W.
Riksha [another son of Akrodhana].
(Bhimasena, *car.* J.)
Dilípa.
Pratípa.
Sántanu.
Vichitravíryya, married Ambá and Ambiká, daughters of the King of Kási, who have issue, after his death, by his half-brother, Krishna-dwaipáyana or Vyása, Dhritaráshtra and Pandu, whose wives bore the five Pandavas, viz :

1 Yudhisthira (see table xix.)
2 Arjuna, father of Parikshita (see do.)
3 Bhíma, no descendants.
4 Nakul, and
5 Sahadeva, } founded the Magadhá line (table xx.)

LINE OF YADU (*continued*).

Jimutra.
Vikrati.
Bhímaratha.
Navaratha.
Dasaratha.
Sakuni.
Kusambha.
Devarata.
Devakshetra.
Madhu.
Anavaratha.
Kuru-vatsa.
Anuratha.
Puruhotra.
Ayu, Angasa, W.
Satwata (several branches).
Andhaka, do.
Bhajamána.
Vidurathá.
Sura.
Sami, Samana, W.
Pratikshetra.
Swayambhuva.
Hridika (several branches).
Devamida.
Sura (numerous projeny by Marusá).
Vasudeva, the eldest, who had thirteen wives.
Krishna and Balaráma, with whom this line becomes extinct, by quarrel of the Yádus.

SYNCHRONISMS OF THE SOLAR AND LUNAR RACES, T.

T. { Buddha of the Lunar race married Iłá, the sister of Ikshwaku, s. l.
{ Harischandra, s. l. cotemporary of Parasuráma, of lunar line.
Sagara, cot. of Taljanga, of do.
Ambarisha, cot. of Gadhi, founder of Kanauj.

## TABLE XIX.—*Pandu Dynasty of Indraprastha, or Dihlí, continued from the line of Puru of the Chandra vansa, or Lunar line, and collateral with the Magadhá Princes, descending from Jarasandha, of* TABLE XX.

| ACCORDING TO THE 'BHÁGAVAT PURANA,' H. | ACCORDING TO THE 'RÁJAVALI,' T.—['V. P.', 461.] |
|---|---|
| Yudhisthira, 1st King of Indraprastha —no issue. | |
| B.C. 3101 J. Parikshita, son of Arjun (son of Abhimanyu, 'V. P.') succeeds. | Parikshita. |
| 1300 W. Janamejaya, W. | Janameja. |
| 1100 T. Satánika | Asmund. |

[1] ['It was finally ruined by the encroachments of the Ganges, but vestiges of it were, at least until lately, to be traced along the river, nearly in a line with Dihlí, about sixty miles to the east.'—'V. P.', p. 452.]

[2] [Another son, Kaṇwa.—'V. P.', 452.

| 'BHÁGAVAT,' (*continued*). | 'RAJÁVALI,' (*continued*). |
|---|---|
| (Sahasranika, *car.* W.) | Adhuna. |
| Aswamedhadatta | Mahajuna. |
| Asímakrishna, Nichakra, W. | Jesrita. |
| Nichakra—Nemi, king of Hastinápur (capital washed away)[1] | Dehtwana. |
| Chakra, built Kausámbhí. | Ugarséna. |
| Ushna, Ukata, king of Kausámbhí, W. | Surséna. |
| Chitraratha. | Sutasshama. |
| (Kabiratha, *car.* W.) | Résmaroja. |
| Vrishnimata, Dhrihtimán, W. | Bachil. |
| Sushena. | Sootpála, |
| Mahipati, *car.* W. | Narhardéva. |
| Sunitha. | Jesrita. |
| Sukhíbala { Richa, W. / Nrichakshu, W. / (Sukhavatí), W. | Bhupata. |
| | Scovansa. |
| | Médavi. |
| Pariplawa. | Sravána. |
| Sunaya. | Kíkan. |
| Medhávin. | Pudhárat. |
| Nripanjaya. | Dasunama. |
| Mridu, W. (Durba). | Adelika. |
| Tigma, W. (Timi). | Huntavarnu. |
| Vrihadratha. | Dandapála. |
| Vasudána, W. (Sudasa). | Dunsála. |
| Satánika. | Sénpála. |
| Udayana, W. (Durdamana). | Khévanraj, deposed, and Pandu line ended, T. |
| Ahínara, W. (Bahinara). | |
| Khandapáni, Dandapani. | |
| Nimi, Niramitra, W. | |
| Kshemaka, *car.* W. | |

The 'Rájavali continues the Indraprastha sovereigns of the Lunar race, through three more Dynasties, Tod, viz. :—

| SECOND DYNASTY 14, PRINCES, REIGNED 500 YEARS. | THIRD DYNASTY. |
|---|---|
| Viserwa (contemporary with Sisunága? T.) | Mahraje, Maharaje of Ferishta? T. |
| Surien. | Sríséna. |
| Sírsah. | Mahipála. |
| Ahangsal. | Mahávali. |
| Vyerjíta. | Srupvarti. |
| Durbara. | Netraséna. |
| Sodpala. | Samukdana. |
| Sursana. | Jetmala. |
| Singraja. | Kálanka. |
| Amargoda. | Kalmana. |
| Amarpála. | Sirmandan. |
| Sérbéhé. | Jeywanga. |
| Padharat. | Hergúja. |
| Madpál, slain by his Rajput minister. | Hírasena. |
| | Antinai, resigned to his minister. |

[Major Cunningham has investigated this section of the Dihlí line with a view to the illustration of certain local coins derived from the

[1] ['His son (Asíma-krishna's) will be Nichakra, who will remove the capital to Kausámbí, in consequence of Hastinápura being washed away by the Ganges.'—'V. P.', p. 461.]

type of the Bactrian monarch Strato. As the nomenclature varies in the different authorities, and these lists may be held to be fairly within the limits of legitimate history, I append the modifications[1] advocated by that numismatist, as well as those cited by him from 'Ward's Hindús.']

| FOURTH DYNASTY.—TOD. | WARD, Vol. i., p. 24. | | CUNNINGHAM, 'J.A.S.B.', vii., 1854. |
|---|---|---|---|
| Séndhwaja. | Dhurandhara, | B.C. 230 | Yonadhara. |
| Mahâganga. | Senodhata, | ,, 210 | Senadhwaja. |
| Náda. | Mahâkataka, | ,, 190 | Mahiganga. |
| Jewana. | Mahayodha, | ,, 170 | Mahajodh. |
| Udiya. | Nátha, | ,, 150 | Sarma. |
| Jehala. | Jirana-rája, | ,, 130 | Jivan-siráj. |
| Ananda. | Udaya-Sena, | ,, 110 | Umed-sen. |
| Rájpála, invaded Kemaon, and killed by Sukwanti, who seized on Indraprastha, whence he was expelled by Vikramáditya, T. | Vindhachala | ,, 90 | Anandajala. |
| | Rájapála, | ,, 70 | Rájapála. |
| | | ,, 60 | Dihlí taken by Sákáditya or Sakwanti B.C. 57, retaken by Vikramáditya Sákári. |

TABLE XX.—*Kings of Magadhá, or Central India, hod. Behar, of the Indu, or Chandra Vansa, Capital, Rájagriha.*

BARHADRATHA DYNASTY.
(See Table XVIII.)

| | |
|---|---|
| Kuru. | Vrihadratha, 'V. P.' |
| Sudhanush. | Kuśágra. |
| Suhotra. | Vrishabha. |
| Chyavana. | Pushpavat. |
| Kritaka. | Satyadhrita. |
| (Visruta). | (Urja), Sudhanwan, 'V. P.' |
| Uparichara—the Vasu. | (Sambhava), Jantu, 'V. P.' |

LINE OF PANDU.
(Brought on from page 237.)

Jarasandha, cot. of Yudhishṭhira and Krishṇa, B.C. 3101 ? J.

| | |
|---|---|
| B.C. 1400. W. Sahadéva, Parikshita born, great war ends. | B.C. 1400, W. Suvrata. |
| (Márjári), or Somapi, W. | Dharma. |
| Śrutavat. | (Nribhrata, WD.) |
| Ayutáyus. | Susuma. |
| Niramitra. | Drirhasena, Vrihadséna, WD. |
| Sukshatra. | Sumati. |
| Vrihatkarman. | Suvala, Suddhamva, WD. |
| Senajit. | Sunita. |
| (Srutanjaya.) | Satyajit. |
| (Vipra.) | Viswajit. |
| (Suchi). | 915. Ripunjaya, 700 WD., a Buddha born in his reign, 'As. Res.' vol. ii., p. 138.[2] |
| (Kshema). | |

[1] [Derived from a new list, 'obtained from a *Purohit* in the Punjáb.']

[2] ['Our list,' says Prof. Wilson, 'and that of the 'Váyu,' specifies 21 kings after Sahadeva; the 'Bhágavata' specifies 20, and in another passage states that to be the

SUNAKA DYNASTY, KINGS OF BHARATKHANDA, REIGNED 128 YEARS.

('V. P.' 138 years, p. 466.)

| | |
|---|---|
| B.C. 915, W. Pradyota, B.C. 700, Wd. 650? 'Bud. Chron.' 2100, Jones. Pálaka. | B.C. 915, W. Viśákhayúpa. Janaka (Rajaca or Ajaca, Wd.) Nandivarddhana (or Takshac, T.) |

ŚAIŚUNÁGAS OR S'ISNÁGS, REIGNED 360 YEARS.

('V. P.' 362 years, p. 467.)

| | |
|---|---|
| B.C. 777, W. Śiśunaga, 1962, T., 550, Wd., 472, B. *car.* Wd. Kákavarna ..... Kshemadherman. Kshatraujas (Kshetranja). Vidmisára (Vidhisára). Ajátaśatru 450, Wd. 551, 'Bud. Chron.' of Ava. Darbhaka, Dásaca. Udayáśwa, Udási, Ajaya. Nandivarddhana. Mahánandi (Mahábali, Wd. 355. | B.C. 777, W. (Sumalya or Vikhyaat, T.) 415. Nanda, *Mahápadma*, 1602, J., 340, W. 'He will bring the whole earth under one umbrella; he will have eight sons, Sumálya and others, who will reign after Mahápadma; he and his sons will govern for 100 years. The Brahmán Kautilya will root out the nine Nandas.' 'V. P.' p. 468. |

MAURYA DYNASTY, GOVERNED 137 YEARS.

('V. P.' p. 470.)

| | |
|---|---|
| B.C. 315. W. Chandra-gupta Sandracottus of Greeks, 1502 J. Vindusára, Várisára. Aśoka Varddhana, patron of the Buddhists, 330, 'Bud. Chron.'[1] Suvásas, Sujaswa, T. Culáta, Wd. | B.C. 315, W. Daśaratha, *car.* T. Wd.[2] Sangata, Bandupálita, Wd. Śálišúka, Indrapálita, Wd. (Devadharma, Wd.) Somaśarman. Saśadharman (Satadhanwa). Vrihadratha. |

ŚUNGA DYNASTY, 110 YEARS.

('V. P.' 112 years.)

| | |
|---|---|
| B.C. 178. W. Pushpamitra, puts his master, the last of the Mauryas, to death, 1365, J. Agnimitra, Sujyeshtha, Vasumitra. Ushmitra, T. | B.C. 178. W. Árdraka, Abhadraca, Wd., Badraka, T. Pulindaka. Ghoshavasu. Vajramitra, (Vicramitar, Wd.) Bhágavata. — Devabhúti. |

KÁŅWA DYNASTY, 45 YEARS. ('V. P.')

| | |
|---|---|
| B.C. 66. W. The Kanwa named Vasudeva usurps his master's kingdom, 1253, J. *car.* T. Bhúmimitra, cot. of Vikramáditya, T. | B.C. 66. W. Náráyaṇa, Parana, T. Śuśarman. (Wilford supposes interval of 150 years before Sipraka.) |

number. My copy of the 'Matsya' names but 19, and the 'Radcliffe' but 12; but both agree in making the total 32. They all concur with the text also, in stating that 1000 years had elapsed from the great war, at the death of the last Várhadratha prince; and this is more worthy of credit than the details, which are obviously imperfect.' 'V. P.' p. 465.]

[1] [*Cf.* also 'Burnouf,' vol. ii. p. 778; 'Huen Tsang Mémoires,' p. 170; 'Bhágavata Puráṇa,' xii., i. p. 12.]

[2] [Buddha Gaya Insc., 'Jour. As. Soc. Beng.', vol. vi. p. 671, 'Jour. Roy. As. Soc.', etc.]

TABLE XXI.—*Ándhra or Vrispala dynasty, of Ándhra (Orissa ?) or Telingana, in continuation of the Magadha line.*

(See Wilford's comparative list from the 'Bhágavat, and three other Puránas, in the 9th vol. of 'As. Res.') [These thirty Andhra Bhritya kings will reign 456 years.—'Vishṇu Puráṇa.' Prof. Wilson adds in a note.—'The 'Váyu' and 'Bhágavata' state also 30 kings and 456 years; the 'Matsya' has 29 kings and 460 years. The actual enumeration of the text gives but 24 names; that of the 'Bhágavata' but 23; that of the 'Váyu' but 17. The 'Matsya' has the whole 29 names, adding several to the list of our text ('V. P.'), and the aggregate of the reigns amounts to 435 years and six months.']

B.C. 21. Śipraka, 'a powerful servant of Śuśarman, kills the latter and founds the Andhra bhritya dynasty;' Balin, Balihita, B.C. 908, J. A.D. 190, WD.[1]
Krishṇa
Śrí Śátakarṇi
Púrnotsanga, Paurnamása } *car.*
Śátakarṇa, II. } W.
Lambodara
Ivílaka, Apilica, WD.
Megha Swáti
Patumat.
Arishṭakarman, *car.* Bhág. Puráṇa.
Hála.
Tálaka, Tiluk, T.
Pravilasena.
Sundara, named Sátkarṇa.

B.C. 21. Chakora Sátkarṇa
Śivaswáti
Gomatiputra, (Gautami, WD. A.D. 500).
Pulimat, Purimat
(Sátkarní IV. *car.* Bhág. Puráṇa).
Śivaśrí.
Śivaskandha.
408. Yajnaśrí, (Yeug nai of Chinese ? WD.)
Vijaya.
A.D. 428. Chandraśrí, (or Vijaya, last Magadha king, 300, J. 546, T.)
Pulomárchish, (Poulomien of Chinese? WD. dies, 648, A.D.
Salomdhi, T. cot. of Bappa Ráwal of Mewár, A.D. 720?)

TABLE XXII.—*Rájas of Kashmír, of the Line of Kuru in the Lunar race: worshippers of Nágas or Snakes.*

[I have scarcely left myself space in this reprint to attempt to unravel the mystifications of the early Kashmír Chronology. The con-

[1] [Pliny, 'Hist. Nat.', vol. vi. p. 22, 'As. Res.', vol. ix. p. 101. 'Sipraka is variously named, *Sindhuka*, Váyu; *Śisuka*, Matsya; Balin, Bhág; and, according to Wilford, *Chhismaka* in the 'Brahmanda P.', and *Súdraka*, or *Śúraka*, in the Kumárikā Khanda of the 'Skanda Puráṇa.' . . . If the latter form of his name be correct, he may be the king who is spoken of in the prologue to the 'Mrichchakati.'' Prof. Wilson, in a valuable notice on the subject, further reviews the various items of evidence bearing on the date of the Andhras, and arrives at the conclusion that 'the race of Andhra kings should not commence till about 20 years B.C., which would agree with Pliny's notice of them; but it is possible that they existed earlier in the south of India, although they established their authority in Magadhá only in the first centuries of the Christian era.'—'V. P.', p. 475. Major Cunningham has discovered the name of Srí Sátakarni among the votive Buddhist inscriptions at Sanchí. He transcribes the original Páli legend as follows, *Rajnye Siri Sátakanisa Avesanisa Vásithi-putasa, Anandasa dánam*, 'Gift of Ananda, son of the neophyte Vaishtha, in the reign of SRÍ SÁTKARNI.'—'Bhilsa Topes,' p. 264. The writing itself is referred to the time of the king of this name, third in the Magadhá list, though any such special appropriation of the designation is open to question when we find Prof. Wilson remarking, 'The adjuncts *Swáti* and *Śátikarṇa* appear to be conjoined or not with the other appellations, according to the convenience of the metre, and seem to be the family designations or titles.'—'V. P.', p. 474. See also Stevenson, under Saurashtrá *infrá*, and 'Bombay Jour.', July, 1853.]

jectural results arrived at severally by Prof. Wilson,[1] Captain Troyer,[2] and Major Cunningham,[3] are subjoined in parallel columns for the scrutiny of future inquirers. Prof. Wilson, without according any great faith to the Sanskrit authority, from which his outline of the history of Kashmír was translated, contented himself with leaving it to carry its own weight. The succeeding commentators have exercised less reserve in the adaptation of the original materials, and hence their rectifications demand a more distinct review. I should naturally desire to abstain from the use of any harsh expression in referring to the exhaustive labors of M. Troyer; but, in truth, I can scarcely bring myself to notice his arguments with much seriousness; and this feeling will, perhaps, be better understood when I say that we are invited to believe that Aśoka reigned in 1436 B.C. (vol. ii., p. 435), and that the Scythian Kanishka ought to be dated in the 13th century, B.C. Equally must the author's endeavor to account for the extraordinary lengths of reigns be received with distrust, which line of reasoning is appropriately climaxed by an attempt to show that it was possible that Ranáditya lived and even reigned 300 years (vol. ii. p. 379).

Major Cunningham's ratiocination towards the general settlement of the relative epochs is based primarily upon the assumed fact of Hiranya and Toramána having been contemporaries of the 3rd Vikramáditya of Ujain (s. 466 = A.D. 409),[4] whom the author, in preparatory training for the more complete development of the same idea in his subsequent works,[5] identified with the Chandra Gupta of the Gupta coin series, and the 3rd Vikramáditya. I do not at all wish to contest that there may have been one of the many monarchs who assumed the supplementary titular designation of Vikramáditya ruling over Malwa at or about this period, and that the potentate in question may well have been a contemporary of Toramána of Kashmír, whom, judging from the style of writing on his coins, I should not desire to place so early as Wilson and Troyer have done; but this concession by no means implies an accord with the other portion of the argument, that would bring the Guptas down to so modern an epoch as is there proposed. In other sections, Major Cunningham's method of compression is about as summary and as little satisfactory as Troyer's system of expansion, inasmuch as the process of the reduction of the supposed superfluous periods of the Aditya and Gonerdiya dynasties is effected by the easy arithmetic of a diminution of the declared totals of *one-half* and *one-third* respectively.

[1] ['Asiatic Researches,' xv., and 'Ariana Antiqua,' p. 347.]
[2] ['Râjataraṅgiṇí.' Paris, 1840.]
[3] ['Numismatic Chronicle,' vol. vi., 1843.]
[4] [Wilford, 'Asiatic Researches,' vol. ix., p. 156.] [5] ['Bhilsa Topes,' p. 142.]

There is one point, however, somewhat assuring, that is—the general coincidence of the different commentators in regard to the proper period of the initial date of the Nága dynasty, and, for the present, we must accept this as the single bright spot in the otherwise hazy atmosphere with which Oriental authors so often envelope the simplest history.]

'The Rája Tarangini, whence this line is taken, commences with an account of the desiccation of the valley by Kasyapa Muni: supposed to allude to the Deluge.'—Wilson, 'As. Res.', vol. xv. p. i.

FIRST PERIOD—KAURAVA RACE, 1266 YEARS.

B.C. 3714. Kashmír colonised by Kasyapa, B.C. 2666, W.
Fifty-three Princes,[1] names omitted by Hindú writers, but partly supplied by Muhammadan authority, as follows:
Sulimán.
Cassalgham.
Maherkaz.
Bandu-khán, (Pandu of the Lunar line?)
Ládi-khán.
Ledder-khán.
Sunder-khán,—Hindú worship established.
Cunder-khán.
Sunder-khán.
Tundu-khán.
Beddu-khán.
Mahand-khán.
Durbinash-khán.
Deosir-khán.
Tehab-khán, dethroned by king of Kabul.
Cálju-khán.
Luvkhab-khán.
Shermabaram-khán.
Naureng-khán, conquered China.
Barigh-khán.
Gowasheh-khán.
Pandu-khán II. extended empire to the sea.
Haris-khán.
Sanzil-khán.
Akber-khán.
Jaber-khán.
Nauder-khán.
Sanker-khán, slain by
Bakra Rája.
An interval ensues, and authentic history commences with
2448. Gonerda, I. Kali Yuga, 653. Gonanda or Agnand, a relation of Jarasundha, 1400, W. B.C. 1045, P.
Damodara, 1st.
Gonerda, II.
Thirty-five Princes, names forgotten.
1709. Lava (Bal-lava), Loo of Muhammadan historians. B.C. 570, P.
1664. Kausesaya.
1660. Khagendra.
1600. Surendra, cot. with Bahman of Persia.
1573. Godhara, Gowdher, A. A.
1537. Suverna, Suren, do.
1477. Janaca, Jenak, do.
1471. Sachinara, Seijuner, do.
1394. Asoka, established Buddhism. (See pages 216, 240, B.C. 250?)
1332. Jaloka, adopted castes.
1302. Dámodara, II. a Saiva; transformed into a snake.
1277. Hushka, Jushka, Kanishka, } Tartar princes, re-established Buddhism.
1217. Abhimanyu, an orthodox Hindú, B.C. 423, W. B.C. 73, P.

[1] [M. Troyer has the following note upon the subject of these fifty-three princes:—'C'est sans doute par le vague des expressions de Kalhana, et par le récit des écrivains mahométans qui font mention d'autres rois avant Gonarda 1er, que M. Wilson a été induit à placer avant ce roi une première série de cinquante-trois princes, tandis que le texte, comme je crois l'avoir démontré, ne fixe la durée d'aucune autre série avant celle qui précède le règne de Gonarda iii me. Il serait en effet très-singulier de trouver deux séries consécutives, qui offriraient le même nombre de rois et la même durée de règne. Je suis bien loin de nier qu'il n'ait pu y avoir plusieurs rois avant Gonarda 1er, et j'admets même qu'on a une presque certitude à cet égard; mais le Râdjataranginî n'en dit rien de positif.'—Vol. ii. p. 371.]

SECOND PERIOD—GONERDIYA DYNASTY, 1013 YEARS, OR 378 YEARS AFTER ADJUSTMENT, W.[1]

| Troyer. B.C. | Cunningham. A.D. | Wilson. B.C. | | B.C. | |
|---|---|---|---|---|---|
| 1182 | 53-3[2] | 1182 | Gonerda, III. Nâga worship resumed, | 388 | W. 108, P. |
| 1147 | 61-9 | 1147 | Vibhíshana, | 370 | |
| 1093-6 / 1058 | 73-1 | 1096 | Indrajita, | 352 | |
| | | 1060-6 | Râvana, | 334 | |
| 1028 | 80-8 | 1030-6 | Vibhíshana, II. | 316 | |
| 992-6 | 89-2 | 993 | Nara (Kinnara), persecuted Buddhists, | 298 | |
| 952-9 | 99-2 | 953-3 | Siddha, | 280 | |
| 892-9 | 114-2 | 893-3 | Utpaláksha Adutbulabeh, A. A. | 262 | |
| 862-3 | 121-9 | 862-9 | Hiranyáksha, Teernya, ,, | 244 | |
| 824-8 | 131-2 | 825-2 | Hiranyákula, Herenkul, ,, | 226 | |
| 764-8 | 146-2 | 765-2 | Vásúkula, Ebeshak, ,, | 218 | |
| 704-8 | 163-8 | 705-2 | Mihirákula [Mukula, Troyer], invaded Lanka or Ceylon, | 200 | |
| 634-8 | 178-8 | 635-2 | Vaka, | 182 | |
| 571-8 | 187-8 | 572-2 | Kshitinanda (Nandana), | 164 | |
| 541-8 | 195-2 | 542-2 | Vasunanda, Vistnand, A. A. | 146 | |
| 489-6 | 208-2 | 490 | Nara II. or Bara—Nir, ,, | 128 | |
| 429-6 | 223-2 | 430 | Aksha, Aj, ,, | 100 | |
| 369-6 | 238-2 | 370 | Gopáditya, a pious brahminist, Kulvarít, A. A. | 82 | |
| 309-6 | 253-2 | 310 | Gokerna, Kurren, A. A. | 64 | |
| 251-7 | 269-11 | 253 | Narendráditya, Nurundrawut, A. A. | 46 | |
| [3]215-4 | 279-0 | 216-9 | Yudhisthira, surnamed the blind, (see Lunar race?) | 28 | |
| | | | ADITYA DYNASTY, 192 YEARS. | | |
| 167-3 | 287-6 | 168-9 | Pratápáditya, kinsman of Vicramáditya, | 10 | W. |
| | | | | A.D. | |
| 135-3 | 303-6 | 136-9 | Jalaucas, Juggooh, A. A. | 22 | |
| 103-3 | 319-6 | 104-9 | Tunjina, a great famine, Bunjir, ,, | 54 | |
| 67-3 | 338-6 | 66-9 | Vijaya, Bejeery, ,, | 90 | |
| 59-3 | 341-6 | 60-9 | Jayéndra, Chander, ,, | 98 | |
| 22-3 | 360 | 23-9 | Arya Rája, of miraculous accession, (Sandhimati), | 135 | 400, P. |
| | | | GONERDIYA LINE RESTORED, 592 YEARS, OR 433 ADJUSTED. | | |
| A.D. | A.D. | A.D. | | | |
| 24-9 | 383 | 23-3 | Méghaváhana, Megdahen, A. A., invited Bauddhas, and invaded Ceylon. | | |
| 58-9 | 400 | 57-9 | Sréshtaséna, or Pravaraséna. | | |
| 88-9 | 415 | 87-3 | Hiranya, contention with Toramána Yuvarája, contemporary with Vicramáditya. | | |
| 118-11 | 430 | 117-5 | Mátrigupta, a Bráhman from Ujjain, succeeds by election, | 471 | W. |
| 123-8 | 432-6 | 122-2 | Pravaraséna, invaded Siláditya of Gujarát, (table xxvii.) | 476 | |
| 183-8 | 464 | 185-2 | Yudhisht'hira II. | 499 | |
| 204-11 | 483 | 224-5 | Nandrávat, Naréndráditya, or Lakshman'a | 522 | |
| 217-11 | 490 | 237-5 | Ranáditya, married daughter of Chola Rája, | 545 | |
| 517-11 | 555-6 | 537-5 | Vicramáditya, supposed an interpolation (Ujjain princes?) | 568 | |
| 559-11 | 576-6 | 579-5 | Bálâditya, last of the Gonerda race, | 592 | |

[1] See also 'Ayín-Akbarí,' vol. ii. p. 164.

[2] The fractional figures express the months of the year to which they are in each case appended.

[3] Note, p. 364.

NÁGA OR KARKOTA DYNASTY, 260 YEARS, 5 MONTHS.

| Troyer. A.D. | Cunningham. A.D. | Wilson. A.D. | |
|---|---|---|---|
| 597-3 | 594-6 | 615-5 | Durlabhaverddhana, contemporary with Yezdijird. |
| 633-3 | 630-6 | 651-5 | Pratápáditya, founded Pratápapur. Durlabhaca, *car.* W. |
| 683-3 | 680-6 | [1]701-5 | Chandrápíra, or Chandránand, a virtuous prince. |
| 691-11 | 689-2 | 710-1 | Tárápíra, a tyrant. |
| 695-11 | 693-2 | 714-1 | Lalitáditya, conquered Yasovarma of Kanauj, (Yasovigraha of inscriptions) and overran India. |
| 732-7 | 729-9 | 750-8 | Kuvalayápíra. |
| 733-7 | 730-9 | 751-8 | Vajráditya. |
| 740-7 | 737-9 | 758-8 | Prithivyápíra. |
| 744-8 | 741-11 | 762-10 | Sangramápíra. |
| 751-8 | 748-11 | 769-10 | Jajja, an usurper, deposed by |
| 754-8 | 751-11 | 772-10 | Jayápíra, married daughter of Jayánta of Gaur, encouraged learning, invaded Bhíma Séna of Gujárat, 841? |
| 785-8 | 782-11 | 803-10 | Lalitápíra. |
| 797-8 | 794-11 | 815-10 | Sangrámápíra II. or Prithivyápíra. |
| 804-8 | 801-11 | 822-10 | Vrihaspati, or Chippatajaya, son of a prostitute, whose five brothers governed in his name. |
| 816-8 | 813-11 | 834-10 | Ajitápíra, set up by the same usurpers. |
| 852-8 | 849-11 | 870-10 | Anangápíra, restored to the succession. |
| 855-8 | 852-11 | 873-10 | Utpalapíra, last of the Karkota race. |
| | | | UTPALA DYNASTY, 84 YEARS 5 MONTHS.[2] |
| 857-8 | 854-11 | 875-10 | Áditya Vermá, or Avanti Vermá, a severe famine. |
| 886-8 | 883-2 | 904-1 | Sankara Vermá, invaded Gujjara and Rája Bhoja (? see Málwá), Kashmír cycle brought into use, 59. |
| 904-8 | 901-10 | 922-9 | Gopála Vermá, killed in youth. |
| 906-8 | 903-10 | | Sankatá, last of the Vermá race. |
| 906-9 | 903-10 | 924-9 | Sugandhá Ráni, recommended the election of |
| 908-9 | 905-10 | 926-9 | Párt'ha.—The Tatris and Ekangas powerful. |
| 924-9 | 920-10 | 941-9 | Nirjita Vermá, also called Pangu, the cripple. |
| 925-9 | 921-10 | 942 9 | Chakra Vermá, civil wars. |
| 936-9 | 931-10 | 952-9 | Sura Vermá. |

[1] Renaud, 'Mémoire sur l'Inde,' p. 189; 'Noveaux Mélanges Asiatiques,' vol. i. p. 196.

[2] [Prof. Wilson, in anticipation of the due course of publication, has obligingly favoured me with the subjoined note on an inscription which, under the double aspect of geographical proximity and identity of family names, seems to establish some sort of connexion between its line of kings and the Varmá dynasty of Kashmír:]—'An inscription of some interest has lately been communicated to the Royal Asiatic Society by the President, having been sent to him by Mr. John Muir; unfortunately it is not known where it was originally found, beyond the fact that it was procured in the north-west of Hindústán; another defect is want of date, but the character in which it is written renders it probable that it is not later than the seventh or eighth century. The invocation shows it to belong to the orthodox system, as it is addressed to the Creator of the Triad, Brahmá, Vishṇu, and Rudra, for the sake of the creation, preservation, and destruction of the universe. The document records, in a plain and uninflated style, the following succession of princes, of the Yadu family: 1. Sena Varmá; 2. Árya Varmá, his son; 3. His son, Śrídeva V.; 4. His son, Vradípta V.; 5. His son, Iṣwara V.; 6. His son, Vriddha V.; 7. His son, Siddha V.; 8. His son, Jala V.; 9. His son, Yajna V.; 10. His son, Achala V.; 11. His son, Diváakara V.; 12. His younger brother, Bháskara V., who married Jayavatí, daughter of Kapila-varddhana; 13. Their daughter was Iswarí, married to Chandra-gupta, son of the king of Jálandhara: on her husband's death she founded an establishment for religious mendicants, which foundation it is the purpose of the inscription to record.

| Troyer. A.D. | Cunningham. A.D. | Wilson. A.D. | |
|---|---|---|---|
| 937-9 | 932-10 | 953-9 | Part'ha, a second time. |
| 938-9 | 933-4 | 954-3 | Chakra Vermá, ditto |
| 939-3 | 933-10 | 954-9 | Sankara Verdhana. |
| 939-7 | 935-4 | 956-3 | Chakra Vermá, a third time. |
| 939-11 | 936-8 | 957-7 | Unmatti Vermá. |
| 941-11 | 938-10 | 959-9 | Sura Vermá II. |
| | | | LAST OR MIXED DYNASTY, 64 YEARS 4 MONTHS. |
| 942-1 | 939-4 | 960-3 | Yasaskara Deva, elected sovereign. |
| | 948-4 | 969-3 | Sangrama Deva, dethroned and killed by |
| 951-1 | 948-10 | 969-9 | Parvagupta, slain at Suréswari Kshetra. |
| 952-10 | 950-2 | 971-3 | Kshemagupta, destroyed many Viharas of Buddhists. |
| 961-4 | 958-8 | 979-9 | Abhimanyu, intrigues and tumult. |
| 975-2 | 972-8 | 993-9 | Nandigupta, put to death by his grandmother Diddá. |
| 976-2 | 973-9 | 994-10 | Tribhuvana, shared the same fate. |
| 978-2 | 975-9 | 996-10 | Bhimagupta, ditto. |
| 982-6 | 980-0 | 1001-1 | Diddá Ráni, assumed the throne herself, adopts |
| 1006-9 | 1003-6 | 1024-7 | Sangráma Deva II. (with whom Wilson's list closes.) |
| | 1028-4 | 1032 | Harirája and Ananta Deva,[1] his sons (continued from the printed Tarangini.) |
| | 1080-9 | 1054 | Kálasa. |
| | 1088-10 | 1062 | Utkarsha, and Harsha deva. |
| | 1100-7 | 1062 | Udayama Vikrama, son of the latter. |
| | | 1072 | Sankha Rája. |
| | 1110-11 | 1002 | Salha, grandson of Udayama. |
| | 1111-3 | 1072 | Susalha, usurper, do. |
| | 1127-3 | 1088 | Mallina, his brother (end of Kalhana Pandit's list.) |
| | 1127-9 | 1088 | Jaya Sinh, son of Susalha, (Jona Rája's list.) |
| | 1149-9 | 1110 | Paramána. |
| | 1159-3 | 1119 | Bandi deva. |
| | 1166-3 | 1126 | Bopya deva. |
| | 1175-7 | 1135 | Jassa deva, his brother, an imbecile. |
| | 1193-8 | 1153 | Jaga deva, son of Bopya. |
| | 1208-2 | 1167 | Rája deva. |
| | 1231-6 | 1190 | Sangráma deva, III. a relation |
| | 1247-6 | 1206 | Ráma deva. |
| | 1268-7 | 1227 | Lakhana deva, adopted. |
| | 1281-10 | 1261 | Sinha deva, new line; killed by his brother-in-law |
| | 1296-4 | 1275 | Sinha deva II. an usurper, who was himself deposed and killed by the Mlechas under Rája Dullach (?) |

The name or title Varmmá, or Varmá, is especially appropriate to a man of the Kshatriya, the military and regal caste; it affords, therefore, no safe clue to the identification of this dynasty; but the mention of Jálandhara intimates their position among the mountains not far from Kashmír, where we find a race of princes bearing the same title; the first of these, Avanti Varmá, began his reign after the middle of the ninth century, and he may have been a scion of the family recorded in this inscription, which, as above stated, is in a character that may be possibly of the seventh or eighth century, just prior to the date of the Varmá dynasty of Kashmír. Thirteen generations, of what appears to have been a peaceable succession, will carry us back at least two centuries, so that we may safely place the first prince of this series in the sixth century of the Christian era.']

[1] The lengths of reigns only are given in the original: calculating therefore backwards from 'Alá-ud-dín, it becomes necessary to curtail the reign of Harirája (52 years) by about 30 years, to form a natural link with Wilson's date of Sangráma Deva.—J. P. [Major Cunningham ('Num. Chron.', vol. vi.) has pointed out the error committed by Prinsep in this place in confounding 'Alá-ud-dín of Dihli with the Kashmír monarch of the same titular designation, whose date should therefore be corrected to A.D. 1351, or, as adjusted by Major Cunningham, to 1339.]

THE BHOTA DYNASTY.

| Troyer. A.D. | Cunningham. A.D. | Wilson, A.D. | |
|---|---|---|---|
| Udayana-deva | 1318-10 | 1294 | Sri Rinchana, obtained throne by conquest. |
| Kota Ráni | 1334-0 | 1294 | Kota Ráni, his wife.[1] |

[The names of the Musalman kings are continued from Major Cunningham's paper—]

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Shâh Mír | 1334 | 6 | 10 | Fateh Shâh | 1483 | 7 | 28 |
| Jamshir | 1337 | 5 | 0 | Muhammad (2nd time) | 1492 | 7 | 28 |
| Alá-ud-dín | 1339 | 4 | 0 | Fateh Shâh (ditto) | 1513 | 5 | 7 |
| Shahâb-ud-dín | 1352 | 0 | 23 | Muhammad (3rd time) | 1514 | 5 | 7 |
| Kutb-ud-dín | 1370 | 0 | 23 | Fateh Shâh (ditto) | 1517 | 5 | 7 |
| Sikandar | 1386 | 0 | 23 | Muhammad (4th time) | 1520 | 5 | 7 |
| Alí Shâh | 1410 | 0 | 23 | Názuk Shâh | 1527 | 5 | 7 |
| Zain ul Abidín | 1417 | 0 | 23 | Muhammad (5th time) | 1530 | 5 | 7 |
| Haidar Shâh | 1467 | 0 | 23 | Názuk Shâh | 1537 | 5 | 7 |
| Hasan | 1469 | 0 | 23 | Mirza Haidar | 1541 | 5 | 7 |
| Muhammad | 1481 | 0 | 28 | Humáyún | | | |

Kashmír finally annexed to the Moghul Empire under Akbar, in 1586, A.D.

## TABLE XXIII.—*Chohán or Chahumán Dynasty, at Ajmír, Dihlí, and afterwards Kotah and Bundi.*

'The Chohans, one of the four Agnicula tribes, Chohâns, Purihârs, Solânki and Pramára, said to have been produced by a convocation of the gods on Mount Ábú supposed of Parthian descent.'—Tod, vol. ii. p. 451.

B.C. 700 Anala, or Anhul Chouhan, established at Garra Mandela.
Suvácha.
Mallan, source of Mallani tribe?
Galan Súr.

A.D. 145 Ajipála, Chakravartti, founder of Ajmír, 202 of Virát era?

500 Sámanta Déva,
Mahá Déva,
Ajaya Sinh, ? Ajipala,
Virá Sinh,
Vindasur,
Vairi Vihanta,
} Wilford.

684 Dola Raí, lost Ajmír to Muhammadans.

695 Manikya Raí, founded Sambhar: hence title of Sámbrí Rao, slain by Moslem invaders under Abul Aás; eleven names only in Jáéga's catalogue, Tod, vol. ii. p. 444.

[2]
Mahásinha.
Chandra Gupta, (of Allahabad pillar inscription? See Kanauj.)
Pratáp Sinh.
Mohan Sinh.
Setarai.
Nágahasta.
Lohadhár.
Vira Sinh, II.
Vibudh Sinh.
Chandra Ray.

[1] 'The names of the Muhammadan chiefs, who held possession of the valley, sometimes independently, under the Patan and Moghul Emperors, are so disfigured in Nágari characters as to be hardly recognizable. Jona Rája's list continues to Zein-ul-áb-ud-dín, 815 Hijra, whence Sri Vara Pandit continues it to Fateh Shâh, A.D. 1477. The 'Rájavalí Patáka' brings on the line to Akbar's conquest in 1560,' (see Muhammadan dynasties.)—J. P.

[2] 'Bombay Government Selections,' vol. iii. p. 193.

B.C. 770 Harihara Ray (Hursráj, Tod), defeated Subaktegín.
Busanta Rai.
Balianga Rai (Belundeo? Tod), or Dheruca Gaj, slain defending Ajmir against Sultan Mahmúd.
Pramatha Rai.
Anga Rája, (Amilla Deva, Dihlí inscription).
1016 W. Visala Deva,[1] from inscriptions, 1031 to 1095, Tod, interpolated date in the books of Chand, S. 921.
Seranga Deva, a minor.
Ana Deva, constructed the Anah Ságar, at Ajmír.
Hispál (of Ferishtah), father of
977 Jayah Sinh (or Jypal of Ferishtah, burned himself, 1000, see Málwá), extended his dominion to Lahore, etc.
1000 Ananda Deva (or Ajay deo), Anandpál, F.
Someswara, married daughter of Anangpál of Dihlí.
1176 Prithiráy, of Lahor, obtained Dihlí, slain by Shahábuddín, 1192.
1192 Rainasi, slain in the sack of Dihlí, T.
Vijaya Ray, adopted successor of Prithiray (see Dihlí pillar).
Lakunsi, thence twenty-six generations to Nonad Sinh, present chief of Nimrána, nearest lineal descendant of Ajipál and Prithiráj.[2]

## TABLE XXIV.—*Haravati or Harautí branch of the Chohan Dynasty.*

The Haras are descended from Anurája, a son of Visaladeva, or more probably of Mánikya Rai, Tod, vol. ii. p. 454 (see preceding table).

A.D. Anurája, took possession of Asi, or Hansi, in Harjána.
1024 Ishtpála, obtained Asirgarh, miraculously.
Chand Karna.
Lok Pál.
1192 Hamíra (known in Prithirája wars), killed in 1192.
Kálkarna.
Mahá Magd.
Rao Bacha.
1298 Rao Chand, slain with all but one son by Alá-ud-dín.
1300 Rainsi, protected at Chitor, obtained Bhynsror.
Kolan, declared lord of the Pathár, (central India.)
1341 Rao Bango, took possession of the Hun court of Mynál.
Rao Deva, summoned to Lodi's court, abdicated to his son.
Hara Rája, founded Bundí; country called Haravati after him.
Samarsi (Samara Sinh), conquered the Bhils.
Napújí, feud with Solankhi chief of Thoda.
Hamú-jí, defied supremacy of Rána of Mewár.
Birsingh.
1419 Biru.
1485 Rao Banda, a famine, 1487, expelled by his brothers
Samarkandí and Amarkandí, who ruled twelve years.
Narain Dás, recovers Bundí.
1533 Suraj Mal, assassinated by Chitor Rána.
1534 Soortan, a tyrant, banished.
Rao Arjun, his cousin, killed in defence of Chitor.
1575 Rao Rája Surjan, Chunar, and Benares given to him.
Rao Bhoja, separation of Bundí and Kota.

BUNDÍ BRANCH.

1578 Rao Ratan, built Ratanpur, his son Mádhú Sinh receives Kotá from Jehángir, henceforward separation.

[1] The lath of Firoz, bearing Visala Déva's name, is dated S. 1220, in the reign of Vigraha Rai Deva. See *ante*, vol. i. p. 325; also 'As. Res.', vol. vii.
[2] See also lists in 'Ayín-i-Akbarí,' vol. ii. p. 94–97, etc.

A.D. 1578 Gopináth.
1652 Chatra Sál, took Kalberga, under Aurangzíb, killed with twelve princes in battle of Ujjain.
1658 Bhao Sinh, received government of Aurangábád under Aurangzíb.
1681 Anurad Sinh.
1718 Budh Sinh, supported Bahádur Sháh, dispossessed by Jypur Rája.
1743 Omeda, regains Bundí, 1749, with Holkar's aid, retires 1771, dies 1804.
1770 Ajít Sinh, Jugráj, murders Rána of Mewar.
Rao Ráj, Bishen Sinh, minor, protects Colonel Monson's flight.
1821 Rám Sinh.

KOTAH BRANCH.

1579 Madhu Sinh, son of Rao Ratan (see above).
1630 Mokund Sinh.
1657 Jagat Sinh.
1669 Keswar Sinh.
1685 Rám Sinh.
1707 Bhim Sinh, entitled Mahárao.
1719 Arjun.
1723 Durjan Sál, without issue, Zálim Sinh, born 1740.
Ajit, grandson of Bishen Sinh.
Chatr Sál, succeeded by his brother.
1765 Gomán Sinh,—Zálim Sinh, Foujdár.
1770 Omeda Sinh, ,, Regent.
1819 Kiswar Sinh, Madhu Sinh, ditto.

## TABLE XXV.—*Rájas of Malwa, Capitals Ujjayana, and Mandór.*

'This line is taken from Abú'l Fazl,[1] and is supposed to have been furnished from Jain authorities: it agrees nearly with appendix to 'Agni Puráṇa.'—Wilford.[2]

In early ages Mahahmah founded a fire temple, destroyed by the Buddhists, but restored by

B.C. 840 Dhanjí (Dhananjaya, a name of Arjun) about 785 before Vikramáditya (see Anjana, Burmese list).
760 Jítchandra.

[1] ['Ayín-i-Akbari,' vol. ii. p. 49, et seq.

[2] [As Wilford's lists, purporting to be taken from the 'Agni Puráṇa,' were largely quoted in the original edition of this work (A.D. 1835), it is necessary that I should annex the caution in the reception of that author's data since enjoined by Prof. Wilson:—] 'Col. Wilford (Essay on Vikramáditya and Sálivahana, 'Asiatic Researches,' vol. ix. p. 131) has made great use of a list of kings derived from an appendix to the 'Agni Puráṇa, which professes to be the 63rd or last section. As he observes, it is seldom found annexed to the 'Puráṇa.' I have never met with it, and doubt it ever having formed any part of the original compilation. It would appear from Col. Wilford's remarks, that this list notices Muhammad as the institutor of an era; but his account of this is not very distinct. He mentions explicitly, however, that the list speaks of Sálivahana and Vikramáditya; and this is quite sufficient to establish its character. The compilers of the 'Puráṇa' were not such bunglers as to bring within their chronology so well-known a personage as Vikramáditya. There are in all parts of India various compilations ascribed to the Puráṇas, which never formed any portion of their contents, and which, although offering sometimes useful local information, and valuable as preserving popular traditions, are not in justice to be confounded with the Puráṇas, so as to cause them to be charged with even more serious errors and anachronisms than those of which they are guilty.'—'Vishnu Puráṇa,' pp. 38–9. London, 1840.—Again, p. 73, *preface*, 'The documents to which Wilford trusted proved to be in great part fabrications, and where genuine, were mixed up with so much loose and unauthenticated matter, and so overwhelmed with extravagance of speculation, that his citations need to be carefully and skilfully sifted, before they can be serviceably employed.'

B.C. 670 Sálivâhana.[1]
680 Nirvahana.
580 Putra Rájas, or Vánsávalis, without issue.
400 Aditya Punwar, elected by nobles (cot. Sapor, A.D. 191, W.)
390 Birma or Brahma Rája, reigned in Vidharbanagar.
360 Atibrahma, at Ujjain, defeated in the north.
271 Sadhroshana Sadásva-Sena[2]).
191 Heymert, Harcha Megha, killed in battle (misplaced, WD.)
91 Gundrup, Gardabharupa, Bahram-gor ? of Wilford.
56 VIKRAMÁDITYA (3rd of Wilford. A.D. 441 Yesdejird ?) Tuár tr.
A.D. 44 Chandrassen, possessed himself of all Hindústán.
135 Karaksen, Surya Sena, W. 676.
215 Chaturkot (Sactisinha succeeded, W.)
216 Kanaksen (see Saurashtra, which he conquered ? 144, Tod).
302 Chandrapál.
402 Mahendrapal.
409 Karmchandra.
410 Vijyananda, adopted a successor (his son being an infant) Sindula, W.
470 Munja, killed in the Dekhan (reigned A.D. 993 according to Tod).
483 BHOJA[3] (S. 540), by Tod. 567 A.D.[4] Kalidás flourished.
583 Jayachandra, put aside in favour of
593 Jítpál, of the Tenore (Tuár) caste (Chaitra Chandra, 'Bavishya P.')
598 Rána Rája.
603 Rána Baju.
604 Rána Jalu.
620 Rána Chandra.
654 Rána Bahádur.
659 Rána Bakhtmal.
664 Ráy Suhenpál.
669 Ráy Keyretpál.
674 Ráy Anangapál (rebuilt and peopled Dihli, 791, Tod).
734 Kunwerpál.
735 Rája Jagdeva, of the Chohán tribe.
745 Jagannath.
755 Hara deva.
770 Vásu deva.
786 Suradeva.

[1] [Orientalists do not rely much upon Wilford's speculations in these days; but as evidence imperfect in itself has often some foundation in truth, it may not be inappropriate to transcribe the following, which seems oddly to assimilate with some of the indications noted at p. 274-5, vol. i., in regard to the Gupta succession:—'As there are several kings and legislators called Vikrama; in the same manner we find also several Sálivâhanas. This grandson of Dhananjaya is made contemporary with another Vikramáditya, who is supposed to have begun his reign A.D. 191; but, according to others, either in the year 184 or 200. In Raghunáth's lists, current in the western parts of India, which have appeared in print, instead of Sálivâhana, we find Samudrapála.'—'As. Res.' ix. 135. See also pp. 146–7, *ibid*; and the curious tale in connection with Sukáditya or Bhartrihari, brother of Vikramáditya, and his retirement to Bhitári, on the Gumti, near which place, Wilford remarks, 'is a stone pillar, with an inscription, containing only a few couplets from the Mahábhárata:' (see *ante*, p. 240, vol. i., Bhitári Lát Inscription).]

[2] Vásudeva of Wilford, Basdeo, Ferishtah. A.D. 390, father-in-law of Bahram (see Kanauj).

[3] [See Pehewa or Thaneswur Inscription, 'Jour. As. Soc. Beng.' vol. xxii. p. 673, dated 279 Samvat, but of doubtful attribution. Names recorded: 1, Mahendrapála; 2, Jatula; 3, Vijráta; 4, Yajnika; 5, Sagga; 6, Purna; 7, Devarája; 8, Ramchandra; 9, Bhoja.]

[4] The other two Rájas Bhoja, Tod fixes in 665 (from Jain MSS.) and 1035, the father of Udayati.

| | | | |
|---|---|---|---|
| A.D. 801 | Dharmadeva. | | |
| 815 | Bhaldeva. | | |
| 825 | Nanakdeva. | | |
| 834 | Keyratdeva. | | |
| 845 | Pithoura. | | |
| 866 | Maldeva, conquered by Sheikh Shah, father of 'Alá-ud-dín. | Ujjain Inscription, S. 1030=A.D. 980. | |
| | Sheikh Shah, from Ghazni. | | Krishna Rája. |
| 1037 | Dharma Rája Soud, Vizir during minority of | | Vaira Sinha. |
| 1057 | 'Alá-ud-dín, who put him to death. | | Siyaka. |
| | Kemal-ud-din, murdered by | | Amoghavasra, or Vakpati, otherwise Vallabhanareudra. |
| 1069 | Jítpál Chohán (Jaya Sinh of Dihlí and Lahore? 977) a descendant of Manikya Rai? | | |
| 1089 | Harachandra. | | |
| 1109 | Keyratchand. | | |
| 1111 | Oogersein. | | |
| 1124 | Surajnanda. | | |
| 1136 | Tippersein, or Beersén, dispossessed by | | |
| 1146 | Jelal-ud-dín, an Afghán. | | |
| 1168 | Alam Sháh, killed in battle by | | |
| 1192 | Keraksen, son of Beersen, emigrated to Kámrup, married the king's daughter, succeeded to the kingdom, and regained Málwá. | | |

| | | Ujjain Inscription. | [The Asírgarh Inscription furnishes the following names.[1]] |
|---|---|---|---|
| | Bhoja deva. | Udayáditya deva. | Hari-varman. |
| | Udayáditya. | Naravarma deva. | Áditya-varman. |
| | Naravarma. | Yaşovarma deva, A.D. 1137. | Ísvara-varman, (born of Arikári, eldest daughter of the Gupta race.) |
| | Yaşovarma, A.D. 1137. | Jayavarma deva, 1143. | |
| 1200 Narbahen[2] | Ajayavarma, A.D. 1143. | Lakhan, or Lakshmívarma deva, a second son of Yaşo, A.D. 1144? | Sinha-varman. |
| | Vindhayavarma. | | Kharva-varman. |
| | Amushyáyaṇa. | | |
| | Subhatavarma. | | |
| | Arjuna, A.D. 1210. | | |

[1] Undated. See 'Jour. As. Soc. Beng.' vol. v. p. 482.

[2] Piplíanagar, in Bhopál (Shujálpur) copper plates, dated Samvat 1267, 'Jour. As. Soc. Beng.,' vol. v., p. 380:—'An inscription on a Támba Patra found in the village of Pipliánagar, in the Shujalpur Perganah, by L. Wilkinson, Esq., Political Agent, who says, in a letter to the Editor, 'I owe you many apologies for the delay which has transpired in forwarding to you copies and translations of the three remaining Támba patras found at Pipliánagar in 1836. I have now the pleasure to forward a copy and translation of the oldest dated in Samvat 1235. It seems to throw some doubt on the course of succession that appeared to you to have been rendered plain and clear, for eight generations, by the inscription dated Samvat 1267 before submitted to you. That inscription states that Jayavarma was succeeded on the gaddí of Mandap (or Mandu) by his son Vindhyavarma, and he by his son Amushyáyana, and he again by Subhasavarma, and this last Rája by his son Arjuna; whilst this states that Harischandra succeeded Rája Jayavarma, and adds, moreover, in the last verse, that he was the son of Lakshmívarma. This discrepancy may be reconciled by supposing that Rája Harischandra was only a prince of the royal family, and as such became possessed of an appanage and not of the whole kingdom; and the fact that Nilagiri, and not Mandap, was his capital, seems to confirm this supposition, supported as it also is by the title of Mahá Kumára, or prince, given to him. I was about to add translations also of the other two inscriptions; but finding that they both correspond, word for word, with that formerly sent to you in all respects but the dates, which are later —the one only by three and the other only by five years—than that of the former inscription, and that they both record grants by the same Rája Arjuna, translations of them would be but an idle repetition. I enclose, however, copies of both, which

A.D. 1220 Birsal.
1236 Purenmall.
1268 Harnand.
1330 Sakat Sinh, killed by Bahádur Sháh, King of Dakhan.
(On the division of the Dihlí monarchy on Ghiásuddín Tughlak Sháh II's death,)
1390 Dilâwar Khán Ghorí, viceroy of Málwá, assumed sovereignty.
(See Mussalman Dynasties.)—'Ayín-i-Akbarí,' vol. ii. p. 57.

[The inscription on a temple at Oudayapúr, taken by Captain Burt in 1838, claims notice in this place, on account of its supplying us with evidence of the existence, and continued currency for more than four centuries, of an era designated by the name of Udayáditya. The nominal roll of the princes associated with this monumental record does not satisfactorily fall in with the traditionary list of the Mahárájas of Málwá; but this need not affect the authenticity of the one or the other, as the provincial dignities, of which the inscription is an exponent, were usually treated *en seigneur*, whatever title to real power or supremacy the local ruler might chance to possess.

1 Suravira (of the Pávara line).
2 Gondala.
3 Arevalamathana (went to Malava and recovered his former kingdom of Madhya desa, and 'caused this sacred and divine temple to be erected' . . . in the year of the Vikramáditya *Samvat* 1116, corresponding with the Sáka year 981, in the Kaliyuga 4160, and in the same of Udayáditya 446.')
4 Sálivâhana.—'Jour. As. Soc., Beng.', vol. ix. p. 548.]

## TABLE XXVI.—*Saurâshtra (Surát and Gujarát). Capital, Balabhipura. The Balabhi, Balhara, or Bala-rais Dynasty.*

The Jain chronicles of Jai-sinha, consulted by Colonel Tod, trace the ancestry of Keneksen, the founder of the Méwar family, up to Sumitra, the fifty-sixth descendant from Ráma (*vide* the Surya-vansa list). Solar worship prevailed, afterwards the Jain.—[Tod, vol. i. pp. 231, etc.]

| | | Names according to grants dug up in Gujarat.—Wathen.[1] |
|---|---|---|
| A.D. 0? | Maharitu, follows Sumitra, Tod. Antarita. | |
| | Achilsena, | Senapati, { Bhatárka. A.D. 144–190. Dharasena. |
| 144 | Kanaksena, emigrates to Saurâshtra (vol. i. p. 216). | Maharája, Dronasinha. |
| | Mahá Madan Sén, | Dhruvasena I. Dharapatta. |

you may place on record, if you can afford to spare a space for them in your journal. —*Sehore, 27th August*, 1838.' See also 'Jour. As. Soc. Beng.,' vol. vii., p. 736.—[Another Nagpúr inscription, translated and collated with kindred documents by Ball Gungadhar Shashtri supplies the following list:—1. Vairi Sinha; 2. Bhimaka (his son); 3. Rája Rája, or Bhoja Rája (his son); 4. Bhadra Rája; 5. Bhoja deva; 6. Udayáditya; 7. Lakshmí dhara; 8. Nara Varma deva (A.D. 1105); 9. Yaso Varma deva (A.D. 1137); 10. Jaya Varma deva; 11. Lakshmí Varma deva; 12. Vindhya Varma (son of Ajaya Varma); 13. Harischandra (A.D. 1179); 14. Amushayana; 15. Subhâsa Varma; 16. Arjuna (his son, A.D. 1211).] 'Jour. Bomb. B. Roy. As. Soc.', vol. i. p. 263.

[1] [See *ante*, vol. i. p. 256. See also 'Jour. Bomb. B. Roy. As. Soc.' vol. iii. p. 215. —The Rev. P. Anderson has examined the nominal series obtained from previously published grants of this family, and tested them by the aid of new inscriptions. His

| A.D. | | Names according to grants dug up in Gujárat.—Wathen. |
|---|---|---|
| | Sudentu, | Grihasena. |
| 318 | Vijya, or Ajyasena, founded the Balabhí era, Tod.[1] | Śrí dhara Sena, 319. |
| | Padmáditya, | Siláditya I. |
| | Siváditya (466 Gardha-bhela? of Jain MSS.) | Charagriha, I. |
| | Haráditya, | Sridharasena, II. |
| | Suryáditya, | Dhruvaséna, II. |
| | Somáditya. | Sridharaséna, III. |
| | | Siláditya, II. |
| | | (three names obliterated). |
| | | Charagriha, II. |
| 523 | Siláditya, killed, and Balabhi destroyed by the Parthians, 524. | 523 Siláditya, III. |
| | | 559 Siláditya Musalli, IV. |

ORIGIN OF GEHLOTE, GRAHALOTE, OR SESODIA TRIBE OF SURYA-VANSIS,[2]

Names inscribed on Aspur marble, Tod.

| | |
|---|---|
| | Kaiswa, Goha, or Grahádítya, posthumous son of Siláditya, born in Bhander forest. |
| | Nagáditya, of Bhander. |
| | Bhagáditya. |
| | Devádítya. |
| | Ássaditya, founded Áspur in Mewár. |
| | Khalbhoja. |
| | Grahádítya (others make Nagáditya), father of |
| 713 | Buph, or Bappa, seized Chitor, from Mori tribe, A.D. 727, and founded the Gohila or Gehlote, dynasty of Mewár. |

(Continued in Table XXVIII.)

[I extract the following summary of dates, forming the *résumé* of Dr. Stevenson's remarks upon his translations of the Western Cave Inscriptions, published in the 'Jour. Bom. Br. Roy. As. Soc.,' vol. v., without in any way pledging myself for its accuracy; indeed, it will have been seen that Dr. Stevenson and myself differ notably in our ideas of the correct epochs of two of the leading dynasties of India; but for this very reason I am the more anxious to allow him to speak for himself in as much of detail as my space will permit me to concede to reasoning that I so far deny myself the opportunity of contesting.—E.T.]

"I shall now conclude this paper with a short summary of the chief events mentioned in the Sahyádri inscriptions, in chronological order. . . The dates which have

observations, to the following effect, are merely important in the correction of the orthography of names and titles:—'In the Bengal Society's list, the 7th, 10th, and 12th of these kings are called Śrí Dhara sena, but in both the plates now before me the names are precisely the same as the second, *i.e.*, Dhara sena, with the addition of Śrí, which is common to all the kings. Moreover Śiláditya is said in the 'Bengal Journal' to be surnamed Kramáditya. . . The surname is clearly written on plate ii. Dharmáditya. Three of the other kings are not Dharuva, but Dhruva sena.'—'Bomb. Jour.' vol. iii. p. 216.]

[1] This and the Srí-dharasena of the adjoining list, fixed upon as the founders of the Balabhi era or samvat, may probably be the Suraka of the Puránas, mentioned as a Vikramáditya to mount the throne An. Kal. Yug. 3290, or A.D. 191 or 291 ('As. Res.' vol. ix. pp. 135, 203), Wilford. Many legends related by him of the Aditya, belonging to this dynasty.

[2] The Persian historians make Noshizád, son of Noshirván, or Maha Banú, daughter of Yezdijird, the origin of the Sesodia race of Mewár, 531.

not been ascertained from inscriptions, but merely made out by calculation, are marked with an interrogation.

B.C.

200.(?)—A cave was excavated, and an alms-house established in it, on the top of the Náná Ghát, by an Emperor of India, probably Asoka, the first Buddhist Emperor.

70.(?)—The Great Cave Temple at Kárlen was formed by the Emperor Devabhúti, under the superintendence of Xenocrates, (धनुकाकटा or धीनुककटि) a Greek.

65.(?)—A small cave was excavated at Kánheri by the same Xenocrates, in which a supposed tooth of Buddha was deposited, till it was removed to an adjoining tope, as mentioned below.

23.(?)—The expedition of the constructors of the cave mentioned below into Malabar, to quell an insurrection there, took place.

22.(?)—The central or Satrap cave at Násik was excavated by Ushavadatta, son-in-law of the Satrap Nahapána, of the Parthian monarch Kshaharáta (Phrahates ?).

20.(?)—Lands were given to the monks at Junir, who dwelt in the third series of southern caves, by several individuals, and especially by S'isuka, called there S'risuka, the first Andhrabhritya sovereign, while he was yet only prime minister.

15.(?)—The Great Temple Cave at Kánheri was probably excavated by the same monarch, after he ascended the throne. The name given him above is that of the Matsya Purán; here he receives the name of Balin, that given in the Bhágavat.

A.D.

189.—A tope or mound was constructed at Kánheri to contain the tooth of Buddha, mentioned above, and also in honour of a celebrated Buddhist devotee, by Pushyavarman, who was connected with the Andhra royal family.

N.B.—This is the tope opened by Dr. Bird in 1839, and which contained a plate with the date on it.

326.—The village of Karanja, on the Ghats, was made over to the monks at Kárlen by the two great military commanders, who, in the struggles between the regal Satraps and Magadh Emperors, had most likely wrested the adjacent territory from the former and afterwards resigned it to the latter. About the same time, also, the image of Buddha, on the left of the entrance, where these inscriptions are found, was probably executed.

337.—The large cave most to the left of those that contain inscriptions at Násik was excavated at the command of the queen of Gautami-putra, described as lord paramount of India and Ceylon, and who had established in his capital a college for Brahmánical and another for Buddhist science, an institution for teaching archery, and a hospital.

N.B.—Reasons have been adduced to show that the era mentioned in this inscription is the Balabhi, and that it was established in commemoration of the overthrow of the Græco-Parthian empire in Western India, by the united forces of the Magadh Emperor and the Balabhi Commander-in-Chief, who rebelled against his sovereign, the reigning royal Satrap, and rendered himself independent. These Satraps had, in all probability, reigned for a long time in their own right, and had prefixed the title regal to their former appellation to point this out. The latest date on any of their coins is Samvat 390, or A.D. 333; for I think, from the form of the letters, that the era must be the common Samvat. We have, then, only to suppose that on the Indus their government subsisted fourteen years after it was overthrown in Gujarát, as the Balabhi era commences with A.D. 319. In accordance with this supposition, none of the 400 regal Satrap coins that were found at Junir in 1846 belong to the two last Satraps. The vaunting, too, of Rudra Dáma, the last of them but one, on the Girnár inscription,

A.D.

over the Sátkarni ruler of the Dakhan, our Andhra monarch, could refer only to some partial success preceding the final catastrophe, as we usually find people boast most when hardest pressed. From our inscriptions it is evident that the hills in which the caves are excavated were sometimes in possession of the one and sometimes of the other party.

342.—The monastery cave at Kárlen was excavated by a mendicant devotee.

410.(?)—Buddaghosha, the author of the Páli work called in Ceylon the 'Atthakatha,' and the Buddhist apostle of the Burman peninsula, set up a middle-sized image of Buddha on the right porch of the Great Temple Cave at Kánheri.

428.(?)—During the reign of the Andhra monarch Yadnya S'rí Sát Karni, who is mentioned in the annals of China as having sent ambassadors there, a nephew and other relations of his set up the two colossal images on each side of the porch of the same great cave, and at the same time a village was given to the monks.

430.(?)—Other relations of the same Emperor established an alms-house in connection with a cave at Kánheri.

431.(?)—Others of the royal family established a refectory in connection with another cave there.

433.(?)—A monastery cave was excavated at Násik by command of the wife of the commander-in-chief of the same Emperor.

460.(?)—A temple cave at Kuden (Korah), in the Concan, was excavated by the Secretary of the Chief of Salsette, who seems to have exercised authority over a considerable adjoining district of country.

N.B.—The above-mentioned works are all that appear to me to derive from the inscriptions probable indications of the period about which they were executed, whether by means of the dates or the names they contain. The time when the others were engraved can only be guessed at from the style of the letters; but none seem to me to have been inscribed on the Sahyádri rocks at a later period than that last mentioned, and certainly none earlier than the first date here given, bringing them all within the two centuries preceding and the five succeeding the Christian era, during which time Buddhism flourished in Western India, while the modern Hindú system was silently moulding itself into its present form and preparing to take the place, at a somewhat later period, of the religion of Buddha, and to exhibit that compound of Vedic pantheism, Buddhistical tenderness for animal life, and indigenal superstition that is now current in India. During, however, the whole period of Buddhist ascendancy, Brahmáns existed, studied their literature, had their holy places, and performed those of their rites that could be performed in private. The common people also worshipped Krishna, Bhaváni, and S'iva, as local gods, in particular districts. The travels of the Chinese Fa Hian show that, at the beginning of the fifth century, Buddhism prevailed throughout India; and those of Whang Thsang show that this was still the case in the beginning of the seventh century. An inscription, of date A.D. 657, originally affixed to a Buddhist temple near Nagpore, shows that it still prevailed in the East at that period ('Jour. Bom. Roy. As. Soc.,' vol. i., p. 150.) It is to be noticed here, also, that there is a discrepancy of 42 years between the date A.D. 342 and A.D. 428."

TABLE XXVII.—*Gujarát. Capital Patan. The Anhulwára Dynasty, a restoration of the dynasty of the Balháras.*

'Ayín Akbari' list collated with that of the 'Agní Puráṇa,' of Wilford.

| S. | A.D. | |
|---|---|---|
| | 696 | Saila-deva, living in retirement at Ujjain, found and educated. |
| 802 | 745 | Banarája, son of Samanta Sinh (Chohán), who founded Anhulpur (Nerwaleh or Patan), called after Anala Chohán, A. A. |

| | | A.D. | Chowra Dynasty of Anhilpoor. |
|---|---|---|---|
| | | 746 | 1. Wun Ráj, son of Jye Sheker. |
| 806 Jogarája ..... | | 806 | 2. Yog Ráj. |
| 841 Bhíma Rája... | Bhunda-deva, WD. | 841 | 3. Kshem Ráj. |
| 866 Bheur ..... | | 866 | 4. Bhooyud. |
| 895 Behirsinh..... | From the 'Ayín Akbari. | 895 | 5. Vair Sing. |
| 920 Reshadat ..... | Rája Aditya, W. | 920 | 6. Rutnáditya.' |
| 935 Samanta ..... | Daughter, married son of Dihlí Rája: Bhunda, W. | 935 | 7. Sámunt Singh. |
| | | 942 | Mool Ráj Solunkhee.—'Rás Málá.'—London, 1856. |

RÁJAS OF THE SOLANKHI TRIBE.

910 W. Mula Rája usurped the throne.[1]
1025 Chamund, invaded by Sultán Mahmúd (Samanta, W.)
1038 Vallabba (Beyser, or Bisela, 'Ay. Ak.'), ancient line restored.
1039 Durlabba (Dabisalima, F.), usurped the throne.
1050 Bhima rája.
Káladeva (Karan, 'A. A.'), Carna-rajendra, or Visala-deva, WD., who became Paramount Sovereign of Dihlí (see p. 247).
1094 Siddha, or Jayasinh, an usurper (Tod, vol. i. p. 98).
Kumárapála, poisoned.
Ajayapala, son of Jayasinha.

SOLUNKHEE DYNASTY.

List of the successors of Mool Ráj, from a copper-plate inscription, dated Samvat 1266 (A.D. 1210), found at Ahmadábád.

1 Mool Ráj dev.
2 Chámoond Ráj dev.
3 Doorlubh Ráj dev.
4 Bheem dev.
5 Kurun dev.
6 Jye Singh dev.
7 Koomár Pál dev.
8 Ujye Pál dev.
9 Mool Ráj dev.
10 Bheem dev.

'Rás Málá.'

THE BHÁGELA TRIBE.

Múla (Lakhmul, 'A. A.'), Lakhan-raya, W. without issue.
Birdmula, } Baluca-mula, WD.
Beildeva, } of Bhágela tribe.
1209 W. Bhíma Deva, or Bhala Bhíma Deva, same as the last, WD.
1250 Arjun deva, }
1260 Saranga deva, } 'Ay. Ak.'
1281 Karan, } Carna the Gohilá, fled to the Dakhan, when in the year
1309 Gujarát was annexed to Dihlí by 'Alá-ud-dín Muhammad Sháh.

## TABLE XXVIII.—*Ránas of Mewár. Capitals Chitór, Udayapur.*

(Continued from Table XXVI.)

After the destruction of the Balhára monarchy of Saurásh tra, and two centuries' sojourn of the family in the Bhander desert, Baph or Bappa conquered Chitor, and founded a new dynasty in A.D. 727. The hereditary title was changed from Gehlote to Aditya.

| Wilson's list. | Tod, from Aitpúr inscription (dated Samvat 1034, vol. i. p. 802). |
|---|---|
| 750 Guhila..... | 1. Srí Gohadit, founder of Gohila (Gehlote) tribe. |
| Bhoja ..... | 2. Bhoja (Bhagaditya?) |
| | 3. Mahendra. |
| | 4. Naga (Nágáditya). |
| | 5. Syela. |
| | 6. Aprajit (compare with Table XXVI.) |
| | 7. Mahendra. |

[1] See also 'Ayín-i-Akbarí,' vol. ii. p. 74, *et seq.*; Elliot, 'Jour. Roy. As. Soc.', vol. iv. p. 1.

| | Wilson's list. | Tod, from Aitpur inscription (dated Samvat 1034, vol. i. p. 802). |
|---|---|---|
| | Kalabhoja ... | 8. Kalabhoja. |
| | Bhartribhata.. | 9. Khoman, invasion of Chitor from Kábul 812 A.D. |
| | Samaháyika... | Mangat, expelled by chiefs. |
| | Khuman ..... | 10. Bhirtripad, founded thirteen principalities for his sons in Málwá and Gujarát. |
| | | 11. Singhjí, whose Rání, Lakshmí, bore |
| | Allâta ..... | 12. Sri Allat, whose daughter Haria devi was grandmother of |
| | Naravahana... | 13. Nirvahana. |
| | | 14. Salvahana. |
| 967 | Saktivarma ... | 15. Saktikumar, resided at Aitpur, 967, or 1068? Tod, vol. i. pp. 243, 803. |
| | Suchivarma... | Umba Passa. |
| 977 | Naravarma ... | Narvarma, cotemporary with Subuktigín. |
| 1027 | Kirttivarma... | Yasovarma, do. with Mahmúd. Aitpur destroyed. |
| | Vairi Sinh, (Vira Sinha deva of Kanauj? See Bengal.) | |
| | Vijaya Sinh. | |
| | Ari Sinh. | |
| | Vikrama Sinh. | |
| | Sámanta Sinh, 1209, W. | |
| | Kumara Sinh. | |
| | Mathana Sinh. | |
| | Padma Sinh. | |
| | Jaitra Sinh. | |
| | Tej Sinh. | |
| 1165? | Samara Sinh, (Samarsi, T.) born 1149; marries Prithí Rái's daughter. | |
| 1192 | Kerna, or Karan, his son— | |
| 1200 | Rahup,—attacked by Shams ud dín, 1200. | |
| | Nine princes, occupying fifty years, engaged in crusades, to recover Gayá from the infidels (Buddhists), T. | |
| | Bhonsi, recovers Chitor. | |
| 1274 | Lakshman Sinh (Lakumsi, T.), married Ceylon princess. | |
| 1289 | ,, ,, (Ramdeo of Ferishta.) Chitor sacked by 'Alá-ud-dín, (1305, F.) | |
| | Ajaya Sinh (Ajaysi, T.), resided at Kailwarra. | |
| 1300 | Hamíra, son of Ursi, recovered Chitor. | |
| 1364 | Khait Sinh (Khaitsi, T.), captured Ajmír. | |
| 1372 | Laksha Rána (Lakha Rána, T.), rebuilds temples. Expedition to Gayá. | |
| 1397 | Mokuljí, supplants rightful heir Chonda. | |
| 1418 | Khumbo (Kumbho, T. Gownho, 'A. A.'), defeats Mahmúd of Málwá; pillar raised in commemoration at Chitor, Tod, 1439, vol. i. p. 286; vol. ii. p. 761. | |
| 1468 | Oda, murders his father, and is killed by lightning. | |
| 1473 | Raemal, repels invasion of Dihlí monarch Lodi. | |
| 1508 | Sanga, Singram, or Sinka, the *Kalas* or pinnacle of Mewár glory, successfully resists Bábar at Biána, 1526. | |
| 1529 | Ratna, fell in duel with Bundi Rája. | |
| 1532 | Bikramajít, his brother. Second sack of Chitor by Bahádur of Gujarát; recovered by Hamáyún. | |
| | Banbir, the bastard, raised to throne by Rájputs. | |
| 1540 | Udaya Sinh (Oody Sing), third sack of Chitor, 1580, by Akbar. | |
| 1583 | Pertáp (Rána), reverses at Udípur and Kumalnír. | |
| 1596 | Amera (Umra), succeeds, recovers the ruined capital; defeats Abdullah Jan. 1610; makes peace with Jahángír. | |
| 1620 | Kerna (Kurn), last independent Rája; embellished Udípur. | |
| 1627 | Jagat Sinh, tributary to Sháh Jahan; peaceful reign. | |
| 1653 | Ráj Sinh, embanked Lake Rájsamundra. | |
| 1680 | Jay Sinh, forms the Lake Jay-samund. | |
| 1699 | Amera, II. triple alliance with Márwár and Amber, S. 1756. | |
| 1715 | Sangrám Sinh; the *jiziyah* tax abolished. | |
| 1733 | Jagat Sinh II. pays chouth to Mahrattas. | |
| 1751 | Pertáp, II. | |
| 1754 | Ráj Sinh II., country desolated by Mahrattas. | |

1761 Arsi, his uncle, Zálim Sinh's rise.
1771 Hamira, a minor.
1777 Bhím Sinh, his brother. Holkar and Sindia overrun Mewár. Marriage feud of Jaypur and Jodhpur. Kishna Kumár poisoned, and the race of Bappa Ráwal extinguished, all but
1828 Jewan (Javan) Sinh, the only surviving son.

## TABLE XXIX.—*Rahtor Dynasty of Kanauj, afterwards continued in Márwár, or Jodhpur.*

From Tod's genealogical rolls of the Rahtors, preserved by the Jains, vol. ii. pp. 5–7.

A.D. (After the usual Theogony.)

300? Yavanasva, prince of Parlipur? supposed of Indo-Scythic origin.
390 Basdeo (Vasudeva[1]), revives Kanauj dynasty; his daughter marries Bahram Sassan, of Persia. } Ferishtah.
450 Ramdeo, fixed in Márwár—tributary to Feroz Sassan. }
469 Nayana Pála, conquers Ájipála of Kanauj—hence called Káma dhvaja.
Padárat or Bharata, king of Kanauj.
Punja, his son.
570? Dherma Bhumbo, his descendants called Dhánesra Camdhaj (for twenty-one generations bore the name of Rao, afterwards Rája.)
Áji Chandra.

| | From inscriptions.[2] | Fyzábád Copper Plate, 'J. A. S. B.', vol. x. p. 98, dated S. 1220 = A.D. 1187. | From coins, old series.[4] |
|---|---|---|---|
| | | | Aparajitadhajapa-rakrama. |
| Udaya-chandra. | | | Apatirurha. |
| Nirpati. | | | Kragiptapara-shuja? |
| Kenekséna (see | Gupta. | | Sri Vikrama. |
| Málwá 400? | Ghatotkacha. | | Chandragupta. |
| Sehesra-sála. | Chandragupta. | | Samudragupta. |
| Méghaséna. | Samudragupta. | | Kumáragupta. |
| Virabhadra. | .....a son. | | Vikrama Náren-dragupta. |
| Deosen. | | | Sasigupta? |
| Vímalasena. | | | Asvamedhaparáá-krama. |
| | | | New series. |
| Dánasen. | 700? Yasovigraha or Sripála. | 1 Yasovigraha. | |
| Mokunda. | | | |
| Bhadu | Mahichandra. | 2 Mahi Chandra. | |
| 1016 Kora or Chand-pál, F. | 1072 Chandra deva, conq. Kanauj. | 3 Chandra deva.[3] | Mahípala deva. |
| Rájsen. | 1096 Madana Pála. | 4 Madana pála. | Kumárapála deva. |
| Tripála. | 1120 Govinda Chan-dra. | 5 Govinda Chan-dra. | Govinda Chandra. |
| Sri Punja. | | | |
| (Vira Sinha), | 1144 Vijaya Chandra. | 6 VijayaChandra. | Jadjeya deva. |
| see Bengal. | 1163 Jaya Chandra, died, 1193. | 7 Jaya Chandra. | Ajaya deva. |
| 712 (Yass varman), see tab. xxii. | | | |
| 900 (Sáhasanka), see 'Vis. Prak.' | | | |
| Vijayachandra. | | | |
| 1169 Jaya Chandra, (Dal. Pangla). | | | |

[1] Wilford names this prince Sadápála, or Sadasvapala, 'As. Res.', vol. ix. p. 211.
[2] See Essays, vol. i. pp.
[3] 'Who was also very learned, king of kings, etc., and who gained the kingdom of Kanaya Kubja by the power of his arms.'
[4] [See vol. i. pp. 288, etc.; 'Ayín-i-Akbari,' vol. i. p. 80.]

## TABLE XXX.—*Márwár or Jodhpur. Continuation of ditto.*

1210 Sivaji, grandson of Jayachandra, settled in the desert, Kher.
Ashthama (Asothama T.)
Doohar, T. Dula Rai, W. made an attempt on Kanauj and Mandor.
Raipál.
Kanhul.
Jalhun.
Chado.
Theedo.
Siluk or Silko (origin of the Silkáwats or Bhomeàs).
Biramdeva.
1381 Chonda, assaulted Mandor, and made it his capital.
1408 Rinmal, of Gohila mother, made pilgrimage to Gaya.
1427 Rao Joda and twenty-three brothers had separate fiefs.
1458 „ „ founded Jodhpur, and removed from Mandor.
1488 Rao Sújoh, or Surajmal; rape of Rahtor virgins by Pathâns.
1515 Rao Ganga
1531 Rao Maldeo becomes chief Rája of Rájputs; fortifies capital.
1568 „ „ sends his son as hostage to Akbar; marriage alliance.
1583 Udaya Sinh; Chandra Sinh, upheld by clans, installed by Akbar.
1594 Soor Sinh; named Siwaí Rája, a general in Moghul armies.
1619 Rája Gaj Sinh slain in Gujarát.
1637 Jeswant Sinh, died in Kábul.
1680 Ajit Sinh, posthumous. Rahtor conflict at Delhi, 4th July, 1679 (7th Sravan, S. 1716); thirty years' war against empire. Murdered by his son
1724 Abhay Sinh; entitled Mahárája Rájeswar, 1728.
1749 Rám Sinh, son, defeated by his uncle,
1749 Bakht Sinh, who was poisoned in 1752.
1752 Vijaya Sinh (Beejy Sinh) disputed possession with Rám Sinh.
1793 Bhim Sinh usurps throne on his grandfather's death, by defeat of Zálim Sinh.
1803 Mán Sinh. Feud for Kishna Kumárí, the Udípur princess.

## TABLE XXXI.—*The Bikaner Ráj, a scion of Jodhpur.*

1458 Bíka, son of Joda, settled in the Jit country.
1494 Nunkarna.
1512 Jaet.
1546 Kalián Sinh.
1573 Ráy Sinh.
1631 Karna Sinh.
1673 Anop Sinh.
1708 Sarup Sinh.
Sujún Sinh.
1736 Zuráwar Sinh.
1745 Gaj Sinh.
1786 Ráj Sinh, poisoned in thirteen days by
1788 Surat Sinh, regent, who usurped the throne.
1799 „ vanquished Surtan Sinh and Ajib Sinh.
1804 „ annexed Bhatner to his dominions.

## TABLE XXXII.—*Ránas of Amber or Dhund'hár. Capital Jaypur.*

The Cuchwáha race of Rájputs claims descent from Cush, second son of Ráma, king of Ayodhya, who migrated and built the fort of Rotás, on the Sone.

294 Rája Nala, founded Narwar or Nishida.
Thirty-two princes—having the affix, Pála.
965 Sura Sinh.
966 Dhola (Dula) Rai, expelled from Narwar, founded Dhund'hár dynasty.
Kankul.

Maidul Rao, took Amber from the Meenas.
Hundeo.
Kuntal.
1185 Pujandeva (Pajun), married daughter of Prithí Rája.
Malesi
Bijal.
Rájdeo (Sahirdeva? of Narwar, defeated by Mahmúd II. 1251, F.)
Kílan.
Kontal.
Junsi.
Udayakarna—his son, Baloji, obtained Amritsir, called Shekhávat, from his grandson, Shekhjí.
Nara Sinh.
Banbír.
Udhárao.
Chandrasen.
Prithí Ráj, pilgrimage to Dewal on the Indus: murdered by
Bhíma, his son.
Aiskarn.
1550? Baharmal (Puranmal, W.), paid homage to Bábar.
1586? Bhagwán Dás, Akbar's general, wedded his daughter to Jehángír.
1592 Mán Sinh, ditto, governor of Bengal, Dakhan, Kábul.
1615 Bhao Sinh, died of drinking.
1621 Mahá Sinh, ditto.
1625? Jaya Sinh, Mirza Rája, poisoned by his son Kerat.
Rám Sinh, reduced to mansab of 4000.
Bishen Sinh, ditto 3000.
1698 Siwai Jay Sinh, founded Jaypur, published 'Zij Muhamadsháh.'
1742 Iswari Sinh.
1760 Madhu Sinh.
1778 Prithi Sinh, II. minor.
1778 Pertáp Sinh.
1803 Jagat Sinh, an effeminate prince, died without issue.
1818 Jay Sinh, III. posthumous, believed supposititious.

[It is somewhat difficult to decide where each series of inscription princes, often of most circumscribed local power, may most fitly be inserted in the general list; under the claims of caste, the subjoined sovereigns should be classed with the Chohán of Ajmír; and, under the geographical aspect again, their position might be determined by any one of the contiguous principalities by which the modern clump of Shekáwatí states is bounded. I have made them follow Jaypur, as to that kingdom they now belong.

*Inscription on the Temple of Sri Harsha Shekáwatí. Samvat* 1030.

1. Gúvaka, *Chohán.*
2. Chandra rája.
3. Gúvaka.
4. Chandana.
5. Vákpati.
6. Sinha rája, 961 A.D.
7. Vigraha rája, of another race, A.D. 973.

'Jour. As. Soc. Beng.,' vol. iv., p. 367.]

## TABLE XXXIII.—*Raos of Jesalmer.*

Dynasty of the Bhattis, a branch of the Yadu race of the Chandra Vansa, Tod.

Náha, fled from Dwarica to Marusthalí—(Bhágavat).
Prithibáhu—Khíra—Jud-bhán (from Bhatti chroniclers).
Báhu-bal, espoused daughter of Vijaya Sinh, Málwá.
Báhu, killed by a fall from his horse.

Súbáhu, poisoned by his wife, daughter of the Ajmír Rája, Mund.
Rijh married daughter of Ber Sinh of Málwá; invasion of Farid Sháh.
B.C. 94? Rája Gaja, invaded Kandrupkél, in Kashmír.
A.D. 15? Salbahan, fifteen sons, all Rájas, conquered Panjáb, expelled from Kábul.
Báland, invaded by Turks—his grandson, Chakito, source of Chakit tribe.
Kullur, eight sons, all became Mussalmans.
Jinj, seven ditto.
Bhatti, court at Lahor, gave name to family.
Mangal Rao, expelled by king of Ghazni—settled in Mér.
Majam Rao, his son—
730 Kehur, invaded by the Barahas, 787, A.D. 731.
733 Tanno, erected Bíjnot.
813 Biji Rae, continual feuds with the Langas, till 1474. Title Rao exchanged for Rawul.
Deoraj, excavated several lakes, one at Tunnot.
Munda.
1008 Bachera, tributary to Anandapál of Delhi; invaded by Mahmúd.
1043 Dusaj.
Bhojdeo conspired against and killed by his uncle.
1155 Jesal, slain in defending Lodorva. Removed capital to Jesalmér.
1167 Salivahan II., throne usurped by his son, Bíjil.
1200 Kailun, elder brother, repelled the Khán of Baloch.
1218 Chachik Deo, extirpated Chunna Rájputs.
1250 Karan, repelled Muzaffer Khán.
1270 Lakhan Sinh, an idiot, replaced by his son.
1275 Púnpál, dethroned by nobles.
1275 Jaetsi, recalled from Gujarát—defended fort for eight years.
1293 Mulráj III., great sack of Jesalmér by Mabúl Khán, 1294.
Dúdú, elected Ráwul, second sack and immolation.
1306 Gursi re-establishes Jesalmér.
Kéhar, adopted; feuds.
Rao Kailan, or Kerore, conquered to the Indus—lived to 80.
Chachik Deo, fixed capital at Marote; continued feuds.
1473 Bersi, conquest of Multán by Bábar.
Sabal Sinh, Jesalmér becomes a fief of empire, under Ráwuls Jait, Nunkarn, Bhím, Manohar Das; conversion of Bhattis.
Umra Sinh, predatory incursions.
1701 Jeswant, alliance with Mewár—end of Bhatti chronicle.
1622 Akhi Sinh, Sarúp Sinh minister potential.
1761 Mulrája, ditto.
1820 Gaj Sinh, ditto, under British protection.

[Although the dynasty of the Gurha Mundala Rájas can scarcely claim much prominence amid the sovereignties of the larger Indian states, yet the centrical position of their seat of government, and the fullness of the detail of names, render it possible that their annals may tend to throw a light upon the still obscure contemporaneous history of proximate lands.]

*History of the Gurha Mundala Rájas. By the late Col. Sir W. H. Sleeman, formerly Commissioner for the suppression of Thuggee in the Nerbudda Provinces.*

The dominions of the Gurha Mundala sovereigns extended before the death of Sungrám Sá, in the year A.D. 1530, over fifty-two districts, containing each from three hundred and fifty to seven hundred and fifty villages, and, collectively, no less than thirty-two thousand two hundred and eighty. But the greater part of these districts were added to their dominions by the conquests of that prince.

These princes trace back their origin in the person of Jadoo Rae to the year Samvat, 415, or A.D. 358, when, by the death of his father-in-law, the Gond Rája Nagdeo, he succeeded to the throne of Gurha. Mundala was added to their dominion by Gopál Sá, the tenth in descent from that prince, about the year A.D. 634, in the conquest of the district of Marroogurh from the Gond chiefs, who had succeeded to the ancient Haihaibunsi sovereigns of Rutunpore and Lahnjee. That this ancient family of Rájputs, who still reign at these places, reigned over Mundala up to the year A.D. 144 or Samvat, 201, was ascertained from an inscription in copper dug up during the reign of Nizám Sá (A.D. 1749) in the village of Dearee in the vicinity of that place. This inscription was in Sanskrit upon a copper plate of about two feet square, and purported to convey, as a free religious gift from a sovereign of the Haihaibunsi family, the village of Dearee in which it was found, to Deodatt, a Bráhman, and his heirs for ever. The plate was preserved in the palace with the greatest care up to the year 1780, when it was lost in the pillage of the place, and all search for it has since proved fruitless. There are, however, several highly respectable men still living who often saw it, and have a perfectly distinct recollection of its contents. How and when the Gonds succeeded this family in the sovereignty of Mundala we are never likely to learn; nor would it be very useful to inquire.

This family of Haihaibunsis reigned over Lahnjee, formerly called Chumpanuttu; Rutunpore, formerly called Monepore; Mundala, formerly called Muhikmuttee (Mahikmati); and Sumbulpore (Sambhalpur).

The Gurha Mundala dynasty boast a Rajpoot origin, though they are not recognized to be genuine. Tradition says a soldier of fortune from Kandiesh, Jadoo Rae, entered the service of one of the Haihaibunsi sovereigns of Lahnjee, and accompanied him on a pilgrimage to the source of the Nerbudda at Amurkuntuk, and eventually, in S. 415=A.D. 358, succeeded the Gond Rája of Gurha.

When Jadoo Rae succeeded his father-in-law on the throne he appointed Surbhee Partuk as his prime minister, and we have some good grounds to believe, what is altogether singular in the history of mankind, that the descendants of the one reigned as sovereigns of the country for a period of fourteen hundred years up to the Saugor conquest in Samvat 1838, or A.D. 1781; and that the descendants of the other held the office and discharged the duties of chief ministers for the same period. Among the sovereigns during this time, there are said to have been fifty generations and sixty-two successions to the throne; and among the ministers only forty generations. This would give to each reign something less than twenty-three years. In 1260 years France had only sixty-three kings, or one every twenty years.[1]

I shall here give a list of the sovereigns, with the number of years each is said to have reigned.[2] This list, as far as the reign of Prem Narrain, the 53rd of this line, is found engraven in Sanskrit upon a stone in a temple built by the son and successor of that prince at Ramnugur, near Mundala. It is said to have been extracted from records to which the compiler, Jygobind Bajpae, had access; and good grounds to rely on the authenticity of this record for above a thousand years may be found in the inscriptions on the different temples built by the several princes of this house, bearing dates which correspond with it; and in the collateral history

[1] In one hundred and sixty years Rome had no less than seventy Cæsars. In two hundred and fifty years the Mamelukes had in Egypt forty-seven sovereigns; and a reign terminated only with a life. The Goths had in Spain, in three hundred years, thirty-two kings.

[2] We have not altered the system of orthography followed by the author, although at variance with Sir W. Jones' scheme, because there are some names for which we should be at a loss to find the classical equivalents.—J. P.

of the Muhammadans and others who invaded these territories during their reign. The inscription on the stone runs thus: 'Friday, the 29th of Jet, in the year Samvat, 1724 (A.D. 1667), the prince Hirdee Sá reigning, the following is written by Suda Seo, at the dictation of Jygobind Bajpae, and engraved by Singh Sá, Dya Ram, and Bhagi Rutee.'

As an instance which collateral history furnishes in proof of the authenticity of this record, it may be stated that Ferishta places the invasion of Gurha by Asuf in the year Hijra 972, or A.D. 1564; and states that the young prince, Beer Narain, had then attained his eighteenth year. The inscription on the stone would place the death of Dulput Sá, his father, in Samvat 1605, or A.D. 1548, as it gives 1190 years to the forty-nine reigns, and the first reign commenced in 415. The young prince is stated to have reigned fifteen years, and tradition represents him as three years of age at his father's death. This would make him eighteen precisely, and, added to 1548, would place the invasion 1563 A.D.

| | | Years. |
|---|---|---|
| 1 | Jadoo Rae, An. Sam. 415, reigned | 5 |
| 2 | Madhoo Singh, his son | 33 |
| 3 | Jugurnáth, ditto | 25 |
| 4 | Ragonáth, ditto | 64 |
| 5 | Roder Deo, ditto | 28 |
| 6 | Beharee Singh, ditto | 31 |
| 7 | Nursing Deo, ditto | 33 |
| 8 | Sooruj Bhan, ditto | 29 |
| 9 | Bás Deo, ditto | 18 |
| 10 | Gopál Sá, ditto | 21 |
| 11 | Bhopál Sá, ditto | 10 |
| 12 | Gopeenáth, ditto | 37 |
| 13 | Rámchund, ditto | 13 |
| 14 | Soortan Singh, ditto | 29 |
| 15 | Hureehur Deo, ditto | 17 |
| 16 | Kishun Deo, ditto | 14 |
| 17 | Jugut Sing, ditto | 9 |
| 18 | Muha Sing, ditto | 23 |
| 19 | Doorjun Mul, ditto | 19 |
| 20 | Jeskurun, ditto | 36 |
| 21 | Pertapadit, ditto | 24 |
| 22 | Juschund, ditto | 14 |
| 23 | Munohur Singh, ditto | 29 |
| 24 | Gobind Singh, ditto | 25 |
| 25 | Ramchund, ditto | 21 |
| 26 | Kurun, ditto | 16 |
| 27 | Rutun Seyn, ditto | 21 |
| 28 | Kumul Nyne, ditto | 30 |
| 29 | Beer Singh, ditto | 7 |
| 30 | Nurhur Deo, ditto | 26 |
| 31 | Troo Bobun Rae, ditto | 28 |
| 32 | Prethee Rae, ditto | 21 |
| 33 | Bhartea Chund, his son | 22 |
| 34 | Mudun Singh, ditto | 20 |
| 35 | Okur Seyn, his son, reigned | 36 |
| 36 | Ram Subee, ditto | 24 |
| 37 | Tarachund, ditto | 34 |
| 38 | Odee Singh, ditto | 15 |
| 39 | Bhun Mitter, ditto | 16 |
| 40 | Bhowany Das, ditto | 12 |
| 41 | Seo Singh, ditto | 26 |
| 42 | Hurnaraen, ditto | 6 |
| 43 | Subul Singh, ditto | 29 |
| 44 | Raj Singh, ditto | 31 |
| 45 | Dadee Rae, ditto | 37 |
| 46 | Goruk Das, ditto | 26 |
| 47 | Arjun Singh, ditto | 32 |
| 48 | Sungram Sá, ditto | 50 |
| 49 | Dulput Sá, ditto | 18 |
| 50 | Beernaraen, ditto | [1]15 |
| 51 | Chunder Sá, his paternal uncle | 12 |
| 52 | Mudkur Sá, his son | 20 |
| 53 | Prem Naraen, ditto | 11 |
| 54 | Hirdee Sá, ditto | 71 |
| 55 | Chutter Sá, ditto | 7 |
| 56 | Kesuree Sá, ditto | 3 |
| 57 | Nurind Sá, ditto (*ob.* A.D. 1731) | 44 or 54 |
| 58 | Mohraj Sá, ditto | 11 |
| 59 | Seoraj Sá, ditto (*ob.* A.D. 1749) | [2]7 |
| 60 | Doorjun Sá, ditto | 2 |
| 61 | Nizam Sá, his paternal uncle (*ob.* 1776 A.D.) | 27 |
| 62 | Nurhur Sá, his nephew, son of Dhun Singh, brother of Nizam Sá, but of a different mother (*ob.* 1789) | 3 |
| 63 | Somere Sá, ditto, 9 months (*ob.* 1804) | |

At the close of the reign of Sungrám Sá the dominion of the Gurha Mundala rájas extended over fifty-two districts, but it is believed that he received from his father only three or four of these districts.

[1] [Invasion by Asuf Khán, the imperial viceroy at Kurha Mánikpúr, in 1564 A.D.]

[2] [Invasion by Balajee Bajee Rao, A.D. 1742. See also Captain Fells' Inscription, 'As. Res.', vol. xv. p. 43.7]

[The two inscriptions which follow refer more or less to localities proximate to the site of the country whose history forms the subject of the preceding remarks.]

*Inscription from Khajrao, near Chhatarpur, dated* 1019 *Samvat* = 962 A.D.

| | |
|---|---|
| 1 Nannuka. | 5 Sri harsa. |
| 2 Vag Yati. | 6 Yaso-dharma deva. |
| 3 Vijaya. | 7 Banga. |
| 4 Vihala. | 8 Jaya-varma deva. |

This inscription possesses an adventitious interest in the fact, recorded in its text, relative to its having been engraved, 1st, in irregular letters; 2nd, in clear character; and 3rd, 54 years afterwards (S. 1173), re-engraved in *Kakuda* characters.—'Jour. As. Soc. Beng.', vol. viii. p. 160.

*Kumbhi (35 miles N.E. of Jabalpur) Saugor territory: Inscription, S.* 932 = A.D. 876. *Dynasty entitled Kula-Churi.*

| | |
|---|---|
| 1 Yuvá-Rája-deva, a descendant of Kartta Viryya, of the race of Bharat. | 4 Karna-deva. |
| 2 Kokalla. | 5 Yasas Karna-deva. |
| 3 Gangeya-deva. | 6 Gaya Karna. |
| | 7 Nara Singha. |
| | 8 Vijaya Singha. |

—'Jour. As. Soc. Beng.', vol. viii. p. 481.

[Mr. Ommanney, in forwarding the Multáye plates, of which the translation is subjoined, prefaces them with a few remarks:—]

There are no such names as Datta Rája,[1] Govinda Rája, Máswamika Rája,[2] or Nanda Rája, in the catalogue of Garha Mandala Rájas. They may be descendants of Bakht Buland of Deogarh Bálaghát, but it is not probable. It appears that they were Rahtors (Rashtra kutas), but still they were called Ghorowa or Gond,[3] which induces me still to think they must have reigned somewhere in these parts. The villages mentioned have not the slightest resemblance in name to any in this district, nor can I discover any at all like them at Hoshangábád or Jubalpúr.

[In commenting on Mr. Ommanney's communication, Prinsep adds:—]

One of the most obvious corrections is that of the name on the seal, and in the second line of the third page, where the plate is much worn, viz., Yudhásura in lieu of Yudhástara, which the Sadr Amín apparently supposed a corruption of Yudhishthira. The first name also read as Datta Rája should be Durgga Rája.

But the most material correction applies to the date, which Mr. Ommanney interprets as Samvat 1630, or A.D. 1573. The alphabetical type at once proves that this supposition is many centuries too modern, nor do I clearly see how the pandit could so far have misled his master in the translation, seeing that the text is read by Mr. Ommanney himself and the pandit *s'ateshu shatkena trins'ottareshu.* The

[1] I read this name Durgga Rája.—J. P.

[2] The Sadr Amín reads Máswmaika Rája; but it is probable that the text should be understood as Srimat-Swámika Rája.—J. P.

[3] The word supposed to be Ghorowa is precisely the same as that on the seal, the surname of the Rája, Yudhásura, the 'hero in battle,' so that the connection with the Gond tribes cannot be thence deduced.—J. P.

obvious meaning of this is six hundred and thirty besides,—just about the period we should have assigned to the writing on comparison with the Gupta and Gujaráti styles. But it is not at all certain that this is the correct reading, or that the era can be assumed to be that of Vikramáditya. The precise letters in modern character are,

शक काले संवत्सरे शतेषु * * त्रिंशोत्तरेषु

*Saka kálè samvatsarè s'ateshu ? ? trins'ottarèshu.*

Now, in the first place, the era is here that of Saka or Salivâhana; in the next, after the word *s'ateshu*, hundreds, in the plural number, two unknown characters follow which may be very probably numerals. The second has much resemblance to the modern ८ or eight, but the first is unknown and of a complex form; its central part reminds us of the equally enigmatical numeral in one of the Bhilsa inscriptions. It may, perhaps, designate in a cipher the word *ankè* अङ्के, 'in numerals,' thus purporting 'in the year of Saka, hundreds, numerically eight, and thirty over.' A fertile imagination might again convert the cipher into the word अष्टके, eight, afterwards expressed in figures; but I must leave this curious point for future elucidation, wavering between 630 and 830 for the date of the document, which in either case is of considerable antiquity, and indeed one of the most ancient of such records yet brought to light containing a date.

TRANSLATION OF THE MULTÁYE PLATES.

(On the Seal) Srí Yudhâsura (the adopted name of the prince).

Swasti! Sprung of the pleasing lineage of the Rashṭrakúṭa (Rahtor), like the moon from the ocean of milk, was the Prince Srí Durga Rája through whose conciliatory conduct to the meritorious, and his vigorous energy, extending his rule to the ocean, secured him the good-will of both parties (his friends and enemies). His son was Govinda Rája, whose fame was earned in many a battle; from him was born the self-controlling and fortunate Prince Máswamika Rája, the unrivalled, whose valour is everywhere the theme of song, who never turned his back in battle, and was always victorious. His son is Srí Nanda Rája, much respected by the pious; handsome, accomplished, humane, faultless, a dreadful avenger (*kála*) on his enemies; foremost of the aspirants for military renown, chief of the dignified, and prominent among the active and intelligent, the very tree of desire (*kalpa druma*) to the necessitous.

All natural and acquired qualities seek refuge in his virtuous breast, a firm Bráhmana—a firm Bhágavata[1]—his surname is Srí Yuddhasura[2] (the hero of battle). He hereby proclaims to all his officers, nobles, and the holders of villages, 'Be it known to all of you that we, for the promotion of our father and mother's virtues, consecrating with water, present to Srí Prabha Chaturveda, of the Kautsa tribe, the grandson of Mitra Chaturdeva, and son of Rana Prabha Chaturdeva, the village named Jalau Kuha, bounded on the west by Kinihi-vajará, on the north by Pipparikâ, on the east by Jalukâ, and by Ujánagráma on the south,—on the full moon of the month of Kartika.

Let this gift be held unobjectionable and inviolate by our own posterity, and by princes of other lines. Should any whose mind is blinded with ignorance take it away, or be accessory to its resumption by others, he will be guilty of the five great sins.

It is declared by the divine Vyása, the compiler of the Vedas, 'Many kings have

[1] That is, a rigid disciple of Vishṇu.

[2] Mr. Ommanney reads 'Ghorowa Sur' (Ghorowa the Sanscrit for Gond), but the word is evidently the same as that on the seal.

in turn ruled over this earth, yet he who reigneth for the time is then sole enjoyer of the fruits thereof. 'The bestower of lands will live sixty thousand years in heaven, but he who resumes it, or takes pleasure in its resumption, is doomed to hell for an equal period.''

In the Shakakál, six[1] hundred and thirty years over, was written this edict (Sásanam): Kula, the well-skilled in peace and war, wrote it.

## TABLE XXXIV.—*Orissa, Or-Desa, or Atkala-Desa, hod. Cuttack.*

From the Vansavali, and Rája Charítra, in the Uria language, preserved in the temple of Jagannáth, a record supposed to have been commenced in the 12th century. —Stirling's 'Account of Cuttack.' 'As. Res.,' vol. xv., p. 257.

After the usual detail of the Mythology, and early kings of India, down to Vikramáditya.

| A.D. | |
|---|---|
| 142 | Bato Kesari.[2] |
| 103 | Tirbhoban deo. |
| 236 | Nirmal deo. |
| 281 | Bhíma deva. |
| 318 | Subhan deva. Rakto bahu invades Jagannáth by sea, destroyed by an inundation of the sea, that also formed the Chilka lake. |
| | Indra deva was captured and displaced by the Yavanas, who reigned for 146 years. |
| | KESARI-VANSA RESTORED. |
| 473 | Jajati (Yayáti) Kesari, capital Jajepur. |
| | Suraj Kesari. |

[1] I have kept here Shatkena as read by Mr. Ommanney.—J. P.

[2] Mr. Stirling says[a] that 'no information whatever is afforded by the Orissa chronicles of the origin of the princes called the Kesari vamsa; the founder of the new dynasty in A.D. 473 was Jajati (Yayáti) Kesari, a warlike and energetic prince, but who he was or whence he came we are not apprised. He soon cleared his dominions of the Yavanas, who then retired to their own country.' Perhaps the present inscription may in some measure remove this obscurity. It commences with the conquest of Udhra or Orissa by Janamajeya, the king of Telinga. It is possible that this alludes to the prince of that name in the Puranic lists, but the locality of his dominion and the names of his immediate successors are wholly different from those of the Magadha line, and their history is circumstantially told as of events transpired not long antecedent to the Kesari dynasty of Orissa. His son was Dirgharava, and from the latter was born Apavára, who died without issue. The kingdom was then overrun by invaders from foreign countries (perhaps the same designated as Yavanas in Stirling's 'Chronicles'), when Vichittravira, another descendant of Janemejaya reigning in a neighbouring kingdom, possessed himself of Orissa. His son was named Abhimanyú; his again Chandihara; and from the latter descended Udyotaka Kesari, whose mother, Kolávati, created the temple to Siva as Brahmeswara. The date of the inscription is expressed only in terms of the reign, but, from the style of the Devanágari, it may be confidently affirmed to be later than the epoch fixed for *Lalat Indra kesari* (617 A.D.). Udyotaka Kesari must, then, be one of the thirty-two unrecorded princes who succeeded him in the Kesari line previous to the establishment of the Gangavamsa family on the Cuttack throne. The figure 3, it may be remarked, closely resembles the ancient form of this numeral; the 8 is nearly of the modern shape.

[The following is the list of names supplied by this inscription:—]

1. Janamejaya.—2. Dirgharava.—3. Apavára.—4. Vichitravira.—5. Abhimanyu. —6. Chandihara.—7. Udyotaka Kesari.—On the 3rd of the light half of Phalguna of the Samvat 18, of the victorious reign of rája Udyotaka Kesari Deva, who was most rich, king of kings, a rája of the lunar line and lord of Kalinga. 'Jour. As. Soc. Beng.' October, 1837.

[a] 'As. Res.,' vol. xv.,' p. 265.

Ananta Kesari.
617 Lálat Indra Kesari, built the Bhuvaneswar temple, 657.
Thirty-two reigns, extending 455 years. Cuttack built, 989.

GANGA-VANSA.

1131 Churang, Saranga deva, or Chor Ganga, invaded Orissa. } Tribhuvana.[1]
1151 Gangeswara deva, extended dominions. } Mala Deva.
1174 Ananga Bhím deo, ascended Gajapati throne; endowed Jagannáth; struck coin; title Ráwat Rái.[2] } Proli. Rudradeva.
1201 Rájeswara deo.
1236 Rája Narsinh deo, built Kanárak (black pagoda) 1277.

FIVE NARA SINHAS AND SIX BHÁNUS, CALLED THE SURAJ-VANSA RÁJAS.

1451 Kapil Indra deo, adopted by the last Bhánu, assisted Telinga Rája against Musalmans, 1457.
1471 (Himber? Rai of Uria, according to Ferishta.)
1478 Pursottem deo, conquers Conjeveram.
1503 Pertáb Rudra deo, left thirty-two sons, all murdered by
1524 Govind deo, his minister.
1531 Pertáb Chakra deo, the last of the dynasty.
1539 Narsinha Jenna, deposed by
1550 Telinga Mukunk deo, (Harichandan) invaded, and sovereignty of Orissa overthrown, by King of Bengal, 1558.

[1] This inscription is stated to be engraved on a slab about six or seven feet high, which is to be found close to the temple of Rudradeva at Warangal, the modern name for the ancient capital of the Telingana rájas, called in this inscription *Arunakundapura* or *patana*. The inscription,—that is, its commencement and close, excluding the Sanskrit slokas,—is in an old dialect of mixed Telugu and Oorya. It is valuable as containing the genealogy of rája Rudradeva, and as showing that the previous dynasty established at Warangal was overcome and displaced by his father, called Proli rája. The inscription gives an authentic date also for the reign of Rudradeva in Telingana, viz., 1054 Saka, corresponding with 1132 A.D., and shows this to be the rája, called in the temple annals of Jagannath, Churang or Chorgunga, who is said to have overrun Katak coming from the Karnatik, and to have founded or established the Gunga-vansa dynasty in the very year of this inscription, viz., 1054 Saka. Rája Rudradeva is mentioned as a benefactor of Jagannath, and Katak is included in the boundaries which are assigned to his dominions at that period. These are described in the inscription as extending as far as the sea to the east; the Sree Saila? mountains to the south; as far in another direction, which must be west, as Bâkataka; while to the north his rule extended as far as the Malyavanta, now perhaps the Malyagiri, mountain, west of Baleswar.—1. Tribhuvana, a great warrior, of the Kâkalya race.—2. Mala Deva, 'chief of the Kâkalya rájas.'—3. Proli rája, the son of Mala Deva, reduces Govind rája, king of Tailapa? gives back his kingdom to the king of Erha;[a] conquers and brands the founder of Nádha? in Mantra-kutnagar, and because the Erha rája declines to join in the expedition, expels him afterwards from his ráj.—4. Rudradeva. Ascendancy gained by Bhima rája (half-brother of Rudradeva), consequent upon the death of the Gokurna rája, the Chorhâdaya rája, and the king of Tailapa; inflated with these successes, he ventures to defy Rudradeva. Bhima flies in terror.

[2] [Bhubaneswa (in Orissa) Inscription. 'Jour. As. Soc. Beng.,' vol. vi., p. 278. '*Aniyanka Bhíma*, the brother of "an excellent man," who had come to the throne through marriage with Suramá, the daughter of Ahirama.' Prinsep adds, 'the date of Ananga Bhíma also agrees closely with what was assumed from the style of the alphabet and the Samvat 32 of the Basu-deva slab (inscription in As. Soc. Museum, vol. vi., p. 88, 'Jour. As. Soc. Beng.'). It will hence become a question whether

[a] The pundits say this is not Orissa, which always in the old dialects is written Oordha Des.

KHURDA RÁJAS; BHUÍ-VANSA, OR ZEMÍNDÁRÍ RACE.

1580 Ramchandra deo, titular Rája under Akbar.
1609 Pursottem deo. Afghan incursions.
1630 Narsinh deo.
1655 Gangadhar deo.
1656 Balbhadder deo.
1664 Mukund deo.
1692 Dirb Sinh deo.
1715 Harikishen deo.
1720 Gopináth deo.
1727 Ramchandra deo. Boundary much reduced.
1743 Birkishore deo. Mahratta depredations.
1786 Dirb Sinh deo, attached to Nágpur, 1755-6.
1798 Mukund Deo, deposed by the English, 1804.

## TABLE XXXV.—*Rájas of Nepál.*

The mythology of Nepál commences, like that of Kashmír, with the desiccation of the valley, for ages full of water, by a Muni called Naimuni) whence the name of the country Naipála), whose descendants swayed the sceptre for near 500 years.—Kirkpatrick's 'Nipal.'

B.C. 3803 Bhurimahágah (adjusted back at 18 years per reign, B.C. 844 ?)
3795 Jayagupta.
3722 Permagupta,
3631 Sri Harkh.
3564 Bhimagupta.
3526 Munigupta.
3489 Bishengupta.
B.C. 3423 Jayagupta II., overcome by Rájputs of the Terai, near Janakpur, B.C. 700 ?
3211 Bal Sinha, descendant of Mahipa Gopála.
3302 Jaya Sinha.
3281 Bhuwáni Sinha, overcome by the

KERRÁT TRIBE OF EASTERN MOUNTAINEERS.

3240 Yellang, adjusted date, B.C. 646 ?
3150 Daskham.
3113 Balánecha.
3081 Kingli.
3040 Henanter.
2990 Tuskhah.
2949 Srupast.
2910 Parb.
2854 Jety dastrí.
2794 Panchem.
2723 King-king-king.
2667 Súnand.
2627 Thúmú.

these figures are, in all cases, to be referred to a Cuttack era, or whether the same Devanágarí alphabet was in use from Shekawáti to Benares, Dinajpur, and Orissa, in the 12th century, while each prince had then an era of his own.' 'Jour. As. Soc. Beng.,' vol. vi., p. 280.']

[The fellow inscription alluded to is to the following effect:—]

This inscription is without date; but the form of the letters and the names of persons mentioned will probably render the fixing of its age an easy matter to those conversant with such subjects. It was composed by a pandit named Srí Váchaspati, in praise of a bráhman of rank and learning, styled Bhatta Srí Bhava-deva, and his family; and it would appear that the slab on which it is engraved must have been affixed to some temple of which Bhava-deva was the founder. The individuals of this family, whose names are given, are—1. Sávarna Muni, the root of the gotra or line.—2. Bhava-deva 1st, a descendant of the above, whose elder and younger brothers were Mahá-deva and Attahása.—3. Rathánga, son of the above, who had seven younger brothers.—4. Atyanga, son of the above.—5. Budha, son of the above, surnamed Sphurita.—6. Adi-deva, son of the above.—7. Govardhana, son of the above, whose mother's name was Devakí.—8 Bhava-deva 2nd, son of the above, surnamed Bála-valabhí-bhujanga, whose mother's name was Sángoká, and who was minister to Rája Harivarma-deva and his son.

| | | | |
|---|---|---|---|
| 2558 | Jaigri. | 2065 | Teshú. |
| 2498 | Jenneo. | 2019 | Sungmía. |
| 2425 | Suenkeh. | 1950 | Jusha. |
| 2365 | Thúr. | 1887 | Gontho. |
| 2294 | Thamu. | 1813 | Kimbhúm. |
| 2211 | Barmah. | 1739 | Galijang, displaced by Khetris of the |
| 2138 | Gunjeh. | | |
| —— | Kashkún. | | |

SURYA-VANSA RACE.

| | | | |
|---|---|---|---|
| 1658 | Nevesit (adjusted date of conquest, B.C. 178). | 724 | Vasu datta verma. |
| 1608 | Matta Rátio. | 691 | Sripatri. |
| 1517 | Kaikvarma. | 688 | Siva vriddi. |
| 1441 | Pasupush deva (founded Paspatnáth). | 611 | Vasanta deva. |
| | | 550 | Deva. * |
| 1385 | Bhoskar varma, a great conqueror. | 493 | Brikh (Vriksha) deva. |
| | | 436 | Sankara deva. |
| 1311 | Bhumi varma | 386 | Brahma deva. |
| 1270 | Chandra varma. | 335 | Mán deva, erected Sambhunáth mundil. |
| 1249 | Jaya varma. | | |
| 1187 | Vrisha varma. | 297 | Mahe deva. |
| 1130 | Sarva varma. | 247 | Vasanta deva. |
| 1081 | Pathi (Prithi) varma. | 190 | Udaya deva. |
| 1025 | Jist (Jayertha) varma. | 143 | Mán deva, II., three years' drought. |
| 977 | Kuber (Kuvera) varma. | | |
| 901 | Hari varma. | 98 | Sukam. |
| 824 | Siddhi varma. | 48 | Siva deva. |
| 763 | Haridatta varma (founded Sápae Narayan temple), | 6 | Narendra deva. |
| | | A.D. 27 | Bhima deva, varma, displaced by the |

AHIRS, OR ORIGINAL SOVEREIGNS.

| | | | |
|---|---|---|---|
| 43 | Bishen gupta. | 178 | Bhúmi gupta, expelled by |
| 117 | Krishna gupta. | | |

THE NEVERIT DYNASTY, RESTORED.

| | | | |
|---|---|---|---|
| 218 | Siva deva varma (adjusted date, A.D. 470). | 773 | Soho deva. |
| | | 807 | Vikrama deva. |
| 259 | Anghú varma. | 808 | Narendra deva. |
| 301 | Kirtu varma. | 810 | Ganakáma deva.* |
| 319 | Bhima Arjuna deva. | 895 | Udaya deva. |
| 358 | Nanda deva. | 901 | Narbhay deva. |
| 371 | Siva deva. | 908 | Bhoj deva bhadra. |
| 387 | Narendra deva. | 917 | Lakshmi kám deva datta. |
| 424 | Bala deva. | 938 | Jaya deva, reduced Patan. |
| 441 | Sankara deva. | 958 | Udaya deva. |
| 453 | Bhima Arjuna deva, II. | 966 | Bala deva. |
| 469 | Jaya deva. | 977 | Padiem deva. |
| 488 | Sri bala deva. | 984 | Nag Arjuna. |
| 504 | Kondara deva. | 987 | Sankar deva. |
| 531 | Jaya deva, II. | 1004 | Bam deva. |
| 574 | Bala deva, III. | 1006 | Srí Harak deva. |
| 585 | Balanjun deva. | 1022 | Siva deva. |
| 622 | Raghaba deva (adjusted date, A.D. 880[1]). | 1050 | Indra deva. |
| | | 1062 | Mán deva. |
| 985 | Sikar deva.* | 1067 | Narendra deva. |

[1] This is exactly the first year of the Newár era, He, it is said, introduced the Samvat into Nepál, which may apply to this, and not to the era of Vikramáditya. (With one or two exceptions, marked *, these reigns are of natural lengths, and require no adjustment.)

| | | | | | |
|---|---|---|---|---|---|
| 1073 | | Rudra deva.* | 1195 | | Anya mall—a famine. |
| 1153 | | Amrita deva (a great dearth). | 1244 | | Obhaya mall, ditto, and earthquakes. |
| 1157 | | Súmesar deva. | 1246 | | Jaya deva. |
| 1164 | | Baz kám deva. | | | |

1280 Anwanta mall deva. Kásias and Tirhut families settled in Nepál, Samvat 1344, A.D. 1287.
Jayananda deva.
Jaya sinha mall.
Jaya Raera mall, daughter married Hari Chandra, Rája of Benares—his daughter, Ráj Lachmí, succeeded, but was deposed by
1323 Jaya deva, who was dispossessed of the throne by
1323 Hara sinha deva, Rája of Simroun, who was expelled from his own dominions by the Patan sovereign of Dihlí. (See below.)
Belal Sinha, capital Bhatgaon.
Srí deva mall.
Náya mall.
Aşoka mall.
Jestilí mall.
Jait mall.

| Newár year. | | |
|---|---|---|
| [1]731 | 1600? | Jaya Eksha Mall (or Jye Kush Mull), divided Patan, Khatmandu, Banepa, and Bhatgaon between his daughter and three sons. |

BHATGAON.

| | | |
|---|---|---|
| | | Raya Malla. |
| | | Bhu Bhin malla. |
| | | Besson malla. |
| 790–800 | 1669–79 | Jaya Chakra mall. |
| | | Tríhoka malla? |
| | | Jagat Johi malla. |
| | | Jay Jeta mitra malla. |
| 816 | 1695 | Bhupati Indra malla. |
| 842 | 1721 | Ranjit malla, formed alliance with Gurkhas, which ended in his subversion, and finally that of all Nepál. |

BANEPA.

| Newár year. | | |
|---|---|---|
| | | Ran Malla. |

KHATMANDU.

| | | |
|---|---|---|
| | | Ratna malla. |
| 753 | 1632 | Jaya Prakás malla. |
| 777 | 1656 | Pratáp malla. |
| 783 | 1662 | Jaya Yoga Prakás malla. |
| 816 | 1695 | Jaya Prakás malla. |
| 822 | 1701 | Bhaskara malla. |
| 836 | 1715 | Mahendra malla. |
| 843 | 1722 | Jaya Jagat Jaya malla. |
| 845 | 1724 | Jaya Yoga Prakás mall, from Patan. |
| 874 | 1753 | |

PATAN.

| Newár year. | | |
|---|---|---|
| | | A daughter. |
| 775 | 1654 | Siddhi Nara Sinha. |
| 806 | 1685 | Nirman Indra malla. |
| 810 | 1689 | Yoga Narendra malla. |
| 816 | 1695 | Mahipat Indra mall. |
| 817 | 1696 | Jaya vira mahendra. |
| 827 | 1706 | Jaya Indra malla deva. |
| 836 | 1715 | Hridiah Narasinha. |
| 837 | 1716 | Rishi nirmal deva. |
| 843 | 1722 | Jaya Zughir Yoga malla deva. |
| 840–42 | 1729–31 | Jaya Vishnu malla. |
| 863 | 1742 | Jaya Yoga Prakás malla deva. |
| 870 | 1749–5 | Jaya Vishnu malla Ágani. |

GURKHALI DYNASTY, DESCENDED FROM THE UDAYAPUR RÁJPÚTS, OCCUPIED KEMAON AND NOAKO'T, FOR SIX OR EIGHT GENERATIONS, PRIOR TO CONQUEST OF NEPÁL.

| A.S. | | |
|---|---|---|
| 1690 | 1768 | Príthinarayan Sáh. |
| 1693 | 1771 | Pertáb Sinha Sáh deva. |
| 1697 | 1775 | Ran Behádur (Behádur Sáh regent), deposed by nobles, 1800. |
| 1722 | 1800 | Girwan Yudh Vikrama Sáh deva. |

[1] [The dates in the Newár cycle inserted in this table were written in by Jas. Prinsep, on the printed page of his own copy of the 'Useful Tables.']

| A.S. | | |
|---|---|---|
| 1726 | 1804 | Ran Behádur, returns from Benares, deposed and assassinated. |
| 1727 | 1805 | Girvan Yudh Vikrama Sáh deva, again. |
| 1738 | 1816 | Rajendra Vikrama Sáh deva. |

The Khatmandu and Patan names, and all the dates from 1632 downwards, are confirmed by Nepálese coins in my possession, collected by Dr. Bramley.—J.P.

## TABLE XXXVI.—*Rájas of Samangarha, or Simroun, in the Tarái, south of Nepál.*

| FROM KIRKPATRICK. | | FROM HODGSON'S LIST, 'JOUR. AS. SOC.' vol. iv. p. 123. |
|---|---|---|
| A.D. 844 | Nána deva. | Nányupa deva, founded Simroun, A.D. 1097. |
| | Kanak deva. | Ganga deva. |
| | Narsinha deva. | Nara Sinha deva. |
| | Ráma Sinha deva. | Ráma Sinha deva. |
| | Bhad Sinha deva. | Sakti Sinha deva. |
| | Karm Sinha deva. | Hara Sinha deva, compelled to abandon his capital and take refuge in the hills, when Simroun was destroyed by Tughlak Sháh, in 1323 A.D. See above for his connection with the Ráj of Nepál. |
| 1323 | Hara Sinha deva. | |

## TABLE XXXVII.—*Rájas of Bengal, capitals, Kanauj?—Gaur.*

Abu'l Fazl enumerates three Dynasties anterior to the family of Bhupála, which last is identified by inscriptions found at Benares, Monghir, Dinajpur, etc., viz. :—

The family of Bhugrut (Bhagiratha), Kshatriya—24 princes, reigned 2418 years.

The family of Bhojgorya, Kaith—9 princes, reigned 250 years.

The family of Udsoor (Adisur), Kaith—11 princes, reigned 714 years.

Then follows the family of Bhupál, to whose 10 reigns 689 years are allotted, which is evidently too much; the succession of names differs also somewhat from those of the inscriptions.

| FROM ABU'L FAZL. | | MONGHIR PLATE.[1] | | DINÁJPUR COPPER-PLATE. |
|---|---|---|---|---|
| 'Ayín-i Akbari,' vol. ii. p. 21. | | Gopála. | | Lokapála. |
| | Bhopála. | Dhermapála. | | Dhermapála. |
| 1027 | Dhirpála. | Devapála. | | Jayapála. |
| 1050 | Deopála. | BUDAL PLATE. | | Devapála. |
| | Bhupatipála. | Rájapála. | | Náráyanpála? |
| | Dhanpatpála. | Súrapála. | | (Two names illegible.) |
| | Bijjenpála. | Náráyanpála. | | Rájapála. |
| | Jayapála. | SARNÁTH INSCRIPTION. | | Vigrahapála. |
| | Rájapála. | Mahipála. | | Mahipála, at Benares. |
| | Bhogpála. | Sthirapála. | | Nayapála. |
| | Jagadpála. | Vasantapála. | 1027 | Vigrahapála. |
| | | 1017 Kumarapála (Fer.) | | |

[1] The Monghir plate, dated 23 or 123 Samvat, evidently refers to the Bhupála dynasty, and not to the Vikramáditya era, as was supposed by Wilkins.—J.P.

VAIDYA RÁJAS OF BENGAL.

1063 Sukh Sen.
1066 Belal Sen, built the town of Gaur.
1116 Lakshman Sen.
1123 Mádhava Sen.
1133 Kesava Sen.
1151 Sura Sen.
1154 Nárâyana—Noujeb, last râja of Abu'l Fazl's list.
Lakshmana.
1200 Lakshmaniya.
(See Muḥammadan dynasties).

BÁKERGANJ INSCRIPTION,[1] 1136 A.D.

Vijaya Sena.
Ballála Sena.
Lakshmana Sena.
Keṣava Sena.

[1] ['The purport of the whole inscription is, a grant in perpetuity to a bráhman named Iswara deva sarma, of the Vâtsa tribe, of the villages of Bágúlé, Bettogâta, and Udyamúna, situated between four equally unknown places in Banga, or Bengal: unless Garhaghaṭaka be Ghoraghâta in the Dinájpur, or Vikramapur, the place of that name in the Decca district. The mention of tanks of fresh water, with houses built on the raised banks for protection against inundation,—of the neighbouring jangal in the west, and of the saline soils, is in favour of the locality being in the Bákerganj district itself, on the edge of the Sundarbans, where sea salt is still manufactured. Probably the Chanda Bhanda tribe, made over as property along with the soil, may have been the poor class named from this tract (quasi Sandabanda, as, indeed, it is generally pronounced) employed in the salt works, and, like the modern Molangis, only a step or two removed from slavery. Regarding the Vaidya dynasty of Bengal (so called from its founder being of the medical caste), there is the same uncertainty as in almost all other portions of Indian history. Some make Adisur the progenitor: he who is stated to have applied to the reigning king of Kanauj, Kanyakubja, for a supply of bráhmans for the Bengal provinces; but the catalogues recorded, on good authority, in the 'Ayín-i Akbarí,' place the whole of the Bhupála dynasty, extending to 698 years, between Adisur and Sukh Sena, the father of Ballála Sena, who built the fort of Gaur. No mention of either of these parties is made in the present inscription, but on the contrary, the father of Baliála Sena is distinctly stated to be Vijaya Sena; and as this is, I believe, the first copper-plate record of a grant by the family, we should give it the preference to books or traditions, on a point of history so near its own time: for Keṣava Sena is but the fourth in descent from Vijaya on the plate; or the fifth, if we take Abu'l Fazl's list. It is curious that wherever the name of Keṣava Sena occurs on the plate there are marks of an erasure; as if the grant had been prepared during the reign of Mádhava Sena, and, on his dying before it was completed (for such a plate must have taken a long time to engrave), the name of his successor, Keṣava, fortunately happening to be of the same prosodial quantity, was ingeniously substituted, and *mutato nomine*, the endowment was completed and promulgated. Keṣava must have been in this case the brother of Mádhava. Little of the historical occurrences of Keṣava's reign are to be gathered from the inflated eulogistic style common to this species of composition. It is said, in general terms, that he kept his enemies in awe, that he was religious and bountiful to the priesthood. The title of Ṣankara Gaureswara, applied to all the members of the family, may mean either the auspicious family of the city of Gaur, or it may convey a sly hint, by the substitution of शङ्कर for सङ्कर (mixed race) of the inferior caste of the Sena dynasty. Nothing is said of the miraculous descent of Ballála Sena, as before remarked; but he is said to have worshipped S'iva for many hundred years (in former generations) to obtain so famous a son as Lakshmana Sena,—who seems to have been the hero of the family,—erecting pillars of victory and altars at Benares, Allahabad, and Jagannátha. It may, however, be reasonably doubted whether these monuments of his greatness ever existed elsewhere than in the poet's imagination. The date of the grant is very clearly written in the lowermost line सं ३ ज्यैष्ठदिने *samvat 3 jyaistha dinè* ... but the rest is not legible. The third year doubtless refers to the reign of Keṣava Sena, which brings the age of the plate to the year 1136 of our era.']

## TABLE XXXVIII.—*Rájas of Assam—anciently Kamrup.*

The best authority is a Native History ('Assam Buranji') by Huliram Dhaikiyál Phukan, of Gohátí. Bengal, era 1236. 'As Jour.,' 1830, p. 297; also Mr. Scott's MS. Notes, arranged by Dr. McCosh.—Buchanan is not to be trusted prior to Rudra Sinha. [Tezpur inscription, 'Jour. As. Soc. Beng.' vol. ix., p. 766.]

After bringing down the genealogies to the Kshatriya dynasty of Dravir (Dharmapála, etc., who invited bráhmans from Gaur to his court, north of the Bráhmaputra!)

BRÁHMAPUTRA DYNASTY, 240 YEARS.

Shusánku, or Arimatu, built fort of Vidyagarh.
Phainguya, an usurper of the race of Kumuteshwar.
Gujanke, former line restored.
Shukaranku.
Mriganku, without issue; died A.D. 1478.
Assam divided into 12 petty states.
1498 —— invaded by Dulal Ghází, son of Hosain Sháh.
Musundár Ghází.
Sultán Ghiásuddín; after whom 12 states restored, of which Nara, east of Saumar, had been gradually rising into power since the middle of the 13th century.

INDRAYANSA (INDU) DYNASTY.

1230? Chu-kapha, became independent, and spread conquests, surnamed Asama (unequalled), whence Assam.
1268 Chu-toupha, son, defeated the Rája of Cachár.
1281 Chu-benpha.
1293 Chu-kangpha.
1332 Chu-khampha; valley invaded by Muḥammad Sháh, 1337.
1364-9 Interregnum of five years; when the ministers installed
1369 Chu-taopha, a relation, conquered Chhutiyas.
1372 Chu-khámethepa, a tyrant, killed by his ministers.
1405-14 Interregnum of nine years.
1414 Chu-dangpha, conquered as far as the river Kurutoya.
1425 Chu-jángpha, his son.
1440 Chu-phúkpha, ditto.
1458 Chu-singpha, ditto.
1485 Chu-hangpha, ditto.
1491 Chu-simpha, a tyrant, put to death.
1497 Interregnum, and Hosain Sháh's invasion, 1498.
1506 Chu-humpha, a brother, various conquests.
1549 Chu-klunpha, his son, built Gurgram.
1563 Chu-khrunpha.
1615 Chu-chainpha; introduced reforms; protected Dharmanárain.
1640 Chu-rúmpha, a tyrant, dethroned.
1643 Chu-chinpha.[1]
1647 Kuku-raikhoya Gohani, dethroned for his brother.
1665? Chukum, or Jayadhwaja Sinha, adopted Hindu faith; defeated Aurangzíb's general?
1621* Chakradhwaja (or Brija) Sinha, built fort of Gohátí; (Sámagrya deva, Mc. C); repulsed Aurangzíb's general? called Chukum?
1665 Kodayaditya Sinha, attempted to convert the people.
1677 Parbattia Kunria.
1681 Lorarája, for some reigns confusion prevailed until
1683* Gadádhara Sinha; his son Kana set aside.

[1] A.S. 1570, A.D. 1648—*Swerganaráyan*, also called Pratápa Sinh, the Hindu name of *Chusingpha*—(Jenkins); he was of the Dehingia family, who took the name of Narain; the other branch, Toughonent, took the title of Sinha.—J. P.

1689-1713* Rudra Sinha, built Rangpur and Jorhát; his coins first bear Bengálí inscriptions.
1715-21* Siva Sinha, established Hindu festivals.
1723-26* Phuléswarí, his wife, acquires sovereign rule.
1729-30* Pramathéswarí devi, ditto.
1732-36* Ambiká devi, ditto.
1738-43* Sarvvéswari devi, ditto.
1744* Pramatha Sinha, made equitable land settlement.
1751* Rájeswara Sinha, embellished Rangpur, allied with Manipur.
1771* Lakshmi Sinha Narendra, younger son, raised and deposed by minister.
1779* Gaurinátha Sinha, his son.
1792* Bharata Sinha Mahámári, conquers Rangpur, and
1793* Sarvánanda Sinha, usurps power at Baingmara.
1796* Bharata Sinha again attempts, but is killed.
Gourinátha Sinha, restored by British; died at Jorhát.
1808* Kamaleswara Sinha, or Kinnarám, not crowned.
Rája Chandrakanta Sinha Narendra, fled to Ava.
Purandhar Sinha, great grandson of Rájeswara Sinha, expelled by Burmese, and
Chandrakanta, restored, but deposed again, and
Yogeswar Sinha, raised by Assamese wife of an Ava monarch, under
Menghi Maha Theluah, the Burmese general and real governor.
1824 Burmese expelled by English.

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1712* Date of Manipurí square coins.
1763* Persian coins of Rája Mír Sinh of Rangpur.
1780* Bengálí coins of Jayantea Rája.

TABLE XXXIX.—*Rájas of Manípur, Mièthiè, or Mogli. From the Miehouba or royal genealogical roll, Capt. Pemberton's MS.*

| A.D. | | Years. | A.D. | | Years. |
|---|---|---|---|---|---|
| 35 ? | Pakhungba, reigned | 140 | 1200 | Thawálthába | 36 |
| 174 | Khoi | 90 | 1236 | Chingtanglalthaba | 11 |
| 264 | Tanuthingmang | 100 | 1247 | Thing baisel homba | 5 |
| 364 | Koening gualba | 15 | 1252 | Puralthaba | 16 |
| 379 | Pensíba | 15 | 1268 | Khumomba | 15 |
| 394 | Kanu khangba | 15 | 1283 | Moeramba | 24 |
| 411 | Nanu khamba | 47 | 1307 | Thangbilalthaba | 22 |
| 428 | Nanu phamba | 90 | 1329 | Kongyamba | 31 |
| 518 | Samuerang | 50 | 1360 | Telhueba | 19 |
| 568 | Kol Thuoba | 90 | 1399 | Laizelba | 5 |
| 663 | Nanuthinghong | 100 | 1409 | Púlseba | 24 |
| 763 | Khongtekcha | 10 | 1437 | Ninthoukhombo, reigned | 35 |
| 784 | Kaereleha | 15 | 1472 | Keyamba | 40 |
| 799 | Yaraba | 22 | 1512 | Koeremba | 5 |
| 821 | Ayangba | 89 | 1517 | Lamchaigmanba | 3 |
| 910 | Ninglouchenga | 39 | 1520 | Nongyilphuba | 9 |
| 949 | Eipál lal Thaba | 24 | 1529 | Kapomba | 17 |
| 973 | Yanglao kai phamba | 8 | 1546 | Tangchomba | 4 |
| 981 | Eerengba | 89 | 1550 | Chullamba | 17 |
| 1070 | Laiyamba | 56 | 1567 | Mungyamba | 35 |
| 1126 | Loitongba | 30 | 1602 | Khakémba | 55 |
| 1156 | Monyoirelba | 14 | 1657 | Khulchouba | 14 |
| 1170 | Eiwalthaba | 30 | 1671 | Paikhomba | 31 |

* These dates are confirmed by coins in Marsden's Num. Or. and others in Captain Jenkins' collection.

| A.D. | | Years. |
|---|---|---|
| 1702 | Charáirongba | 12 |
| 1714 | Pamhaiba—Gharíbnawáz, or Garmúni Rája, or Myanggnumba | 39 |
| 1753 | Khakhilalthába, or Oogat Sháh | 3 |
| 1756 | Mingthoèkhomba — Bharat Sháh | 2 |
| 1758 | Gourí Shám—Maramba | 6 |
| 1764 | Chingthangkhomba, or Jaya Sinha, Nongnangkhomba | 2 |
| 1766 | Gouree Shám | 1 |
| 1767 | Jaya Sinha | 31 |
| 1793 | Robin chandra | 3 |
| 1801 | Modu chandra | 5 |
| 1806 | Charjit Sinha | 6 |
| 1812 | Márjit Sinha, expelled by Barmas, 1819. | |
| 1824 | Gambhir Sinha, brother, regained possession. | |
| 1834 | Kirti Sinha, a minor, son of ditto. | |

TABLE XL.—*The Narapati, or Sholan Dynasty of Karnátá, Dravira, and the southern portion of the Peninsula. Twenty-seven Rájas, reigned* 534 *years.*

(Contemporary with the Gajapati and Asvapati Dynasties from a MS. translated by Buchanan.)

| A.D. | | Years. |
|---|---|---|
| 266 ? | Utinga Sholan, reigned | 32 |
| | Culatunga Sholan | 18 |
| | Rájendra Sholan | 11 |
| | Tiramadi Canda Sholan | 13 |
| | Carical Sholan | 21 |
| | Arundavan Sholan | 13 |
| | Vomyara Sholan | 17 |
| | Sháyangana Sholan | 15 |
| | Munalinda Sholan | 12 |
| | Mavanedi Canda Sholan | 15 |
| | Vakula Sholan | 14 |
| | Alaperinda Sholan | 8 |
| | Tiraveratu Sholan | 15 |
| | Arleana Cadamai Canda Sholan, reigned | 62 |
| | Jayam Canda Sholan | 12 |
| | Kirimi Canda Sholan | 20 |
| | Tondaman Sholan | 12 |
| | Buddam Cattam Sholan | 45 |
| | Shomuman Sholan | 11 |
| | Ghingui Canda Sholan | 11 |
| | Sundra Pandia Sholan | 40 |
| | Pottápa Sholan | 24 |
| | Shingu Vullanda Sholan | 14 |
| | Deva Sholan | 10 |
| | Shayanahatti Sholan | 15 |
| | Vira Sholan | 30 |

800 ? Shayangara Sholan, 24 years; the MS. makes the final date A.D. 288. After the overthrow of the Narapati dynasty, Karnata and Dravira seem to have been separated from the southern districts, in which the Chera, Chola, and Pandava lines were at first united under one sovereignty.

THIRTEEN MAHÁ RÁJAS OF MÁDURA, TANJORE, AND COIMBETORE, REIGNED 239 YEARS.

| A.D. | | Years. |
|---|---|---|
| | Udiamara, reigned | 18 |
| | Jeya deva | 19 |
| | Lohita[1] | 10 |
| | Ganga dira | 11 |
| | Vama deva | 13 |
| | Terupulinda | 34 |
| | Pattáviran | 43 |
| | Srí Devanátha, reigned | 38 |
| | Malik Arjana | 7 |
| | Adi Raer | 13 |
| | Mahá sustra | 16 |
| | Visuvesvara | 8 |
| 950 ? | Chindrabuti | 9 |

After which follow the Belál Rájas of the Karnáta, and the petty Polygér dynasties of Mádura, etc.

[1] During this dynasty the palace of Mádura is supposed to have been erected.

TABLE XLI.—*Belál Rájas of the Karnáta. Capital, Dwárasamudra.*

'Nine Princes governed above the Ghâts 98 years, and afterwards below the Ghâts 111 years.'—(Buchanan, 'Mysore,' vol. iii. p. 112.)

| MACKENZIE'S MS. | | BUCHANAN, VOL. III. P. 474. | | |
|---|---|---|---|---|
| A.D. | | A.D. | | Years. |
| 984 | Hayasala Belála râya. | | Rája Belála Ráya, reigned... | 18 |
| 1043 | Vinâditya Belála. | | Vira B. R. ..... | 11 |
| 1073 | Yareyánga Belála. | | Chinna B. R. ..... | 22 |
| 1114 | Vishnu Verddhana Belála. | | Deva B. R. ..... | 14 |
| 1145 | Vijaya Narasinha Belála. | 1016 | Vishnu verti B. R. ..... | 28 |
| 1188 | Vira Belála. | | Hari B. R. ..... | 19 |
| 1233 | Vira Narasinha deva. | | Imadi B. R. ..... | 17 |
| 1249 | Vira Someswara. | | Visia B. R. ..... | 16 |
| 1268 | Vira Narasinha, taken by the Muhammadans, and his capital destroyed in 1310–11. | | Buca B. R. ..... | 22 |
| | | | China Buca B. R. ..... | 8 |

TABLE A.

[Mr. Walter Elliot, of the Madras Civil Service, some years ago (1836) contributed to the 'Jour. Roy. As. Soc.' an elaborate *résumé* of a series of no less than 595 Hindú inscriptions, collected chiefly in the Southern Mahratta country, or the district of Dharwa; in the western part of the Nizam's territories; in Mysore, the Mangalore collectorate, etc. In due preface to his table of results derived from these especially authentic documents, I prefix an outline of his supplementary remarks which more properly form an introduction to the inscribed genealogies of the leading race:—]

'This [the Chalukya] is the oldest race of which we find satisfactory mention made in the records of the Dekkan; they seem to have belonged to the great tribe that, under the general name of Rajpúts, exercised dominion over the whole of the Northern and Central India. . . . . The names anterior to Teilapa deva (Sáka 895) are given on the faith of two inscriptions,[1] which profess to be taken from older inscriptions on copper-plates then extant,' supported by confirmatory evidence of a like nature. 'From these authorities we learn that Jaya Sinha claims to be descended from ancestors previously enjoying royal power, of whom 59 reigned in Ayodyapura and other places in the North, or in Hindustan. . . . . 16 are then described as reigning after him in the Dekkan. . . . but previous to them, two other families or races had possessed it, the Kartas and the Rattas, the latter of whom were overthrown by Jaya Sinha, who defeated and destroyed Krishna, the Ratta Rája.'

1. Jaya Sinha.
2. Rája Sinha, *Rana Ragaha.*
3. Pulakesi (Sáka 411).[2]
4. Kirtthivarma.
5. Mangalisa.
6. Satya Srí (eventually a family designation) son of No. 4, Sáka 488.
7. Amara.
8. Aditya varma.
9. Vikramáditya (accession Sáka 515).
10. Vinayáditya, *Yudha Malla.*
11. Vijayáditya (accession Sáka 617).
12. Vikramáditya (accession Sáka 655).[3]

[1] (1) At Ye-ur, in the Nizam's Territory, No. 4 of Vikram. II. (2) At Handarki in Tondur, No. 141 of Vikram II.

[2] See also 'Bombay Jour.' ii. 6; Pulakesi's father is also entitled Kirti Varma.

[3] See also Major Le-Grand Jacob's grant of this monarch, dated S. 627 (A.D. 705).

"No records have been obtained of any of the succeeding names in the list, till the time of Teila."

[Reverting to the original text, Mr. Elliot is found introducing his more especial series of documents in the following words:—]

'The inscriptions so arranged are found to relate to four dynasties of princes, reigning over the greater portion of that part of India now denominated the Dakshana, or Dekkan, but at that time Kuntala-desa. The capital was first Kalyán (in the Muhammadan province of Kalbarga), and subsequently Devagiri, now the modern city of Dowlutábád. The limits of this kingdom appear to have been the Nermada on the N.; the ocean on the W.; the line formed by the Kanarese language on the S.E.; and on the S.W. they would include the provinces of Nuggar or Bidnúr, and of Sunda. . . . The eastern boundary I have not been able to ascertain, but it is probable that it did not extend beyond the Ghâts, under which lay the kingdoms of Kalinga and Andhra.

I.—CHALUKYA DYNASTY.

| | Name. | Title. | Accession Śáka. |
|---|---|---|---|
| 1. | Teilapa deva | | 895 |
| 2. | Satya Srí,[1] or Irivi Bhujanga deva | | 919 |
| 3. | Vikramáditya I. or Vibhu Vikram | | 930? |
| 4. | Jaya Sinha deva | Jagadeka Malla | 940? |
| 5. | Someswara deva I. | Treilokya Malla / Ahawa Malla | 962? |
| 6. | Someswara deva II. or Soyi or Sovi-deva | Bhuneka Malla | 991? |
| 7. | Vikramáditya II. or Kali Vikram or Permadi raya | Tribhuvana Malla | 998 |
| 8. | Someswara deva III. | Bhuloka Malla | 1049 |
| 9. | | Jagadeka Malla | 1060 |
| 10. | Teilapa deva II. or Nurmadi Teilap | Treilokya Malla | 1072 |
| 11. | Someswara deva IV. | Tribhuvana Malla | 1104 |

II.—KALABHURJA OR KALACHUNA DYNASTY.

| | | | |
|---|---|---|---|
| 12. | Vijala deva or Bijala | Tribhuvana Malla | 1078 |
| 13. | Morari Sovi deva, or Vira Vijala or Someswara deva | Bhuneka Malla | 1087 |
| 14. | Sankama deva | Ahawa Malla | 1098 |

III.—YADAVA DYNASTY OF DWARA SAMUDRA.

| | | | |
|---|---|---|---|
| 15. | Vira Bellala | | 1113 |
| 16. | Nara simha | | ? |

IV.—YADAVA DYNASTY OF DEVAGIRI.

| | | | | |
|---|---|---|---|---|
| 17. | 1. | Ballam deva | | 1110 |
| 18. | 2. | Jayatuga deva | Jytpál dev | 1115 |
| 19. | 3. | Simhana deva | | 1132 |
| 20. | 4. | Kandarae deva or Kanera deva | | 1170 |
| 21. | 5. | Mahá deva | | 1182 |
| 22. | 6. | Ramachandra | | 1193 |
| 23. | 7. | Shankar deva | | 1232 |

—'Jour. Roy. As. Soc.', vol. iv. p. 4.

'Bombay Jour.' iii. 203. The genealogy of the family is here somewhat differently stated: 3. Pulakesí; 4. Kírthivarma; 5. Satyásraya; 6. Chandraditya; 9. Vikramáditya (brother of 5); 10. Vinayaditya; 11. Vijayaditya; 12. Vikramáditya.

[1] The Kharepátan inscription ('Bombay Jour.' i. 209) describes Satya Sri as reigning in the Śáka year 930 (A.D. 1008). See also Major G. Le-Grand Jacob's Copper-plate Charters ('Bombay Jour.' iv. 97) dated S. 855 (A.D. 933).

## TABLE B.

[I also annex Mr. Wathen's summary of the Chalukya dynasty of the South, the materials for which have also been derived from the authentic sources of inscribed copper-plate grants of land, etc.:—]

THE CHÁLUKYA DYNASTY OF THE SOUTH (CAPITAL, DHÁTAPIPURA).

1. Jayasinha Vallabha i. *Jagadekmalla*, (Śáka 371 ? A.D. 450) 're-establishes' the Chálukya kingdom.
2. Rana-rága (Śáka 391 ? A.D. 470).
3. Pulakesi, *Satyásraya* (Inscription 'Jour. Roy. As. Soc.' vol. v. p. 434) (Śáka 411, A.D. 490).
4. Kúti-varma (conquered Naldroog or Beder) 'conquest over the Maurya and Kadamba princes.'
5. Mangalísa, *Satyásraya*.
6. Neramarí.
7. Aditya varma.
8. Vikramáditya I.
9. Yúdha-malla.
10. Vijayáditya.
11. Vikramáditya II.
12. Kúti-varma II.
13. Taila-bhúpatí (Revolutions, etc.).[1]
14. Bhíma.
15. Kúti-varma III.
16. Apánáya (restores Chálukya power).
17. Vikramáditya III. *Satyásraya*.
18. Taila-bhúpa II. (conquers 'Ráshtra-kúta Rájas of Ranástambha (Chandail, in Berar) and Karkara').
19. Satyásraya.
20. Jayasinha II. (?)
21. Dasa-varma.
22. Jagadeka Malla. (?)
23. Jayasinha III. entitled *Śrí-Prithiví, Vallabha Mahárájádhirája, Paramesvara, Parama-bhatáraka, Satyásraya*, etc.; conquers Panchadrúmíla-nagara, the capital of the Chola king, and seizes the dominions of the seven Rájas of the Konkana.—Inscription dated Śáka 946, A.D. 1025 ('Jour. Roy. As. Soc.' vol ii. 380).[2]

[Mr. Wathen's other grants may be briefly recapitulated as follows:]

1. Śáka 894, A.D. 973. Kakka or Kakkala rája entitled Amogha-varsha; capital Mankhera in the Hyderábád country. See also 'Bombay Jour.' vol. i. p. 211, grant dated Śáka 930.

3. and 4. Śáka 948 and 980.[3] Silára, Silyára, or Śiláhára family present a series of eight or nine princes commencing with Kapard (*circa* 900) who claim to rule over the Konkan.

6. Śáka 1102. Srí Mata-Aparáditya-Rája. Konkana.

7. Śáka 1127. Five local Śilára rájas enumerated.

8. Śáka 1182. Grant by a minister of a king of the Chálukya race.

9. 10. Śáka 1212 and 1194. Yádava family, under Ráma Chandra Deva of Deváravati.

## TABLE XLII.—*Adeva Rájas of Tuluva, Andhra, or Telingána. Capital Woragalli or Warancal.*

Nineteen Adeva Rájas reigned 370 years (211 years ?) supposed to be the eighteen princes of Andhra descent, prior to Pratápa Rudra.[4]

Tribhuvana Malla Rája, of Warangolla.

| A.S. | A.D. | |
|---|---|---|
| | | Poli Rája his son. |
| 1084. | 1162 | Pratápa rudra built a temple. |

East boundary the seashore; Srí Saila hills (South of Hydrabad); West, Vakataka country; North, Mountains N. of Godavery.—J.P.

[1] [See grant of Govinda Rája Ráshtra-kúta, dated Śáka 730, A.D. 808. 'Jour. Roy. As. Soc.' vol. v. p. 350, and the still earlier document of Danti Durga, Śáka 675, A.D. 753.]

[2] [See also Mackenzie collection, introduction, CXV.]

[3] [Also Śáka 939: 'As. Res.' vol. i; and Śáka 1113: 'Trans. Lit. Soc. Bombay,' vol. iii.]

[4] Śásanam from a temple at Warangoll.

| A.D. | | Years. |
|---|---|---|
| 800? | Sri Ranga A.R. reigned | 25 |
| | Vira-Náráyana A. R. | 23 |
| | Wobala, A. R. | 21 |
| | Siruvayanagada A. R. | 22 |
| | Pirungei Endia A. R. | 15 |
| | Canda Gopála A. R. | 32 |
| | Narasinha A. R. | 13 |
| | Cambuli A. R. | 15 |
| | Bacan A. R. | 22 |
| | Vira Narasinha A. R. | 12 |
| | Narasinha A. R. | 8 |
| | Duia A. R. | 12 |
| | Sri Pandia A. R. | 9 |
| | Vasu deva A. R. | 12 |
| | Siric Virindi A. R. | 15 |
| | Cutia deva A. R. | 14 |
| | Rája visia Bujinga | 12 |
| | Salica Náráyana A.R. | 10 |
| | Prithivadi Bacukora Sadicun | 87 |

1167. Uricandi Pratápa Rudra, 58 or 54, ended 1221.
Anna Pemma ..... 77 supposed subsequent to Mahratta subjection.

The Mlechhas (Muhammadans) followed, and Pratápa Rudra; whose officers, Hucca and Bucca, raised the Vijyanagar dynasty; the list of which, in Buchanan, vol. iii. p. 476, differs essentially from that given by inscriptions.

## TABLE XLIII.—*Rájas of Chola* (*Chola-mandeloor, Coromandel*).

(Including the country now called the Karnatic below the Ghâts, hod Tanjore. Capitals, in Ptolemy's time, Arcot; then Wariur, near Trichinopoly; next, Kumbhahona, and lastly, Tanjore.)—Wilson's Mackenzie MSS.[1]

| A.D. | |
|---|---|
| 700–1000 | Kulottungá—others say 3000 B.C. or 500 A.D., or 1200 A.D.; built temple at Tangapur, or Tanjore. |
| | Deva Chola. |
| | Sasisekhara. |
| | Siva linga. |
| 918? | Vira chola. |
| 1100? | Keri kala, persecutor of Rámánuja. |
| | Bhima. |
| 886? | Rájarájendra, subdued various countries. |
| | Vira mártanda. |
| | Kirttivardhana. |
| | Vijaya. |
| | Kanaka. |
| | Sundara, killed a Brahman. |
| | Kalakala. |
| | Kalyána. |
| | Bhadra. |
| 1407? | Pattira Chola? last according to some accounts. |
| | Kulottunga Chola—last according to others, married his daughter to 48th Pandyan prince, who succeeded |
| | An illegitimate son (Nanda?) founded the Tonda Mandalam (Conjeveram)—also annexed to Pandya kingdom. |

## TABLE XLIV.—*Rájas of Chera or Konga* (*comprehending Salem and Coimbetore.*)

'The Kongadesa Rája kal enumerates twenty-six princes.'—Mackenzie's MSS.

| | |
|---|---|
| Vira ráya. | Madhava vermá. |
| Govinda ráya. | Hari varmá. |
| Krishna ráya. | Vishnugopa. |
| Kalivallabha. | Krishna varmá. |
| Govinda II. | Dindikara. |
| Chaturbhuja. | Durvaniti. |
| Kumára deva. | Pushkara. |
| Trivikrama deva. | Trivikrama. |
| Kongani vermá. | Bhúvikrama. |

[1] Wilson, 'Jour. Roy. As. Soc.', vol. iii. p. 119; Dowson, *ibid*, vol. viii. p. 1.

| | |
|---|---|
| Kongani Mahádhirája. | Malla deva. |
| Govinda III. | Ganda deva. |
| Sivaga. | A.D. Satya vrákya deva. |
| Prithiví Kongani Mahádhiráya. | 894 Gauttama deva, subdued by the |
| Rája deva. | |

Chola Rája, from whose descendants it passed to the Belál Rájas of Maisur, and thence to the Vijayanagar dominion.

[BARODA TAMBA-PATRA.

Dated Sáka 734=812 A.D. 'Jour. As. Soc. Beng.,' vol. viii., p. 292.
(Láteśwara[1] kingdom; capital, Elapur.)

| | |
|---|---|
| 1 Govinda Rája. | 5 Govinda II. |
| 2 Karka. | 6 Indra. |
| 3 Krishṇa. | 7 Karka.] |
| 4 Dhruva. | |

## TABLE XLV.—*Pandyan Dynasty of Mádura.*

Tradition ascribes seventy-four princes, of whom thirty-nine names are extant.

| | |
|---|---|
| Kulottunga, 2000 B.C.? | Udanta. |
| Anantaguna. | Rája Charámani. |
| Kálabhúshana. | Rája Sárdula. |
| Rájendra Pándya. | Kulottunga. |
| Rájeswara. | Yodhana pravíra. |
| Gambhira. | Rája Kunjara. |
| Vansapradipaka. | Rája Bhayankara. |
| Puruhutajit. | Ugrasena. |
| Pandya Vamsapátáká. | Mahásena. |
| Sundareswara. | Satrunjaya. |
| Padasekhara. | Bhimaratha. |
| Varaguna, united Chola and Tonda to Mádura. | Bhimaparákrama. |
| Rájendra. | Pratápa Mártanda. |
| Suguna. | Vikrama Kunjaka. |
| Chitraratha. | Yuddha Koláhala. |
| Chitrabhushana. | Atula Vikrama. |
| Chitra dhvaja. | Atula Kirtti. |
| Chitra verma. | Kirttivibhúshana. |
| Chitrasena. | Vamsasekhara, founded the Madura College. |
| Chitravikrama. | Vamsachurámani. |

Náyak Dynasty—founded by Nágama Nayak, an officer of Krishṇa Ráya of Vijayanagar, fourteen princes.

| | |
|---|---|
| 1530 Viswanáth. | Chokanáth; died 1687. |
| Krishnapa. | 1687 Krishṇa mutu Virapa. |
| Virapa. | 1695 Vijaya ranga, under regency of Mangamál. |
| Visvapa. | 1731 Vijaya Kumára, do. of Minakshi ráni. Fort seized by Muhamedans, and Mádura became tributary to Nuwáb of Carnatic, and afterwards to the British. |
| Kumara Krishnapa. | |
| Kasturi Ranjapa. | |
| Mutu Krishnapa. | |
| Virapa; died 1623. | |
| 1623 Terumala, or Trimal, 1663. | |
| 1663 Muta virapa. | |

[1] Supposed to be Kongades by Mr. H. T. Prinsep. See also Wilson's Mackenzie MS., p. 198.

## TABLE XLVI.—*Rájas of Vijayanagar.*

From history, inscriptions, and family genealogy, (see 'As. Res.', vol. xx.) The latter authority, in the usual manner, deduces a direct line from Pandu, of the lunar dynasty, imperfectly following the Pauranic lists to Chandrabija, the last of the Mágadha rájas; to whom succeeds,

| A.D. | |
|---|---|
| | Marru. |
| | Nanda. |
| | Bhutanandi. |
| | Nandihi, who has two sons, Seshanandi and |
| | Yeshanandi, whose fourteen sons, ruling over Bylomdesh, are dispersed by two invaders, Amitra and Durmitra; and seven fled to Andhradesa, or Telingana, where |
| 1034 | Nanda, maharája, erected a kingdom, and founded Nandapur and Warangol. |
| 1076 | Chalik Rája. |
| 1118 | Vijaya Rája; founded Vijayanagar. |
| 1158 | Vimala rao. |
| 1182 | Narasinha deva. |
| 1249 | Ráma deva. |
| 1274 | Bhúpa raya, died without issue. |
| 1334 | Bukka, son of a neighbouring Rája, raised to the throne of the Dakhan by Vidyaranya, his gúrú. |
| 1367 | Harihara rao. |
| 1391 | Deva rao. |
| 1414 | Vijaya rao. |
| 1424 | Pundara deva rao, deposed by Sri Ranga Rája of Kaliandrúg. |
| 1450 | Ráma chandra rao, son of Sri Ranga. |
| 1473 | Narasinha rao. |
| 1490 | Vira nararasinha rája. |
| | Achyuta rao. |
| 1524 | Krishna deva; extended his sway to Gujerát, etc. |
| | Ráma Rája, killed in invasion of Nizám Sháh, and Fmád ul mulk. |
| 1565 | Sri Ranga Rája. |
| | Trimala Rája. |
| | Vira yangat pati. |
| | Sri Ranga II. |
| | Rámadeva rao. |
| | Venkatapati rao. |
| | Trimala rao. |
| | Rámadeva rao. |
| | Sri Ranga rao. |
| | Venkatapati; invaded by the Moghuls and fled to Chandragiri. |
| | Ráma rao; recovered a portion of territory. |
| 1693 | Hari Dás. |
| 1704 | Chak Dás, his brother. |
| 1721 | Chima Dás. |
| 1734 | Ráma ráya. |
| | Gopála rao, son of Chak Dás. |
| 1741 | Yankatapáti. |
| 1756 | Trimala rao. |
| | Sultán Khán took the country in the name of Tipu; and with Vira Venkatapati Ráma ráya, the dynasty became extinct, A.D. 1829. |

## TABLE XLVII.—*Rájas of Maisur (Maheshwar or Mysore.)*

Their genealogy is traced from the Yadu line of Chandravansa.—Mackenzie MSS.

| A.D. | |
|---|---|
| | Betta Vadiyar. |
| | Chamaraja Vadiyar, son of Yadu. |
| 1530 | Timmaraja Vadiyar, son of Betta. |
| | Hiriya Chamarasa Vadiyar, his son. |
| | Bettatha Chamarasa Vadiyar, do., who had three sons, |
| | 1 Timmarája Vadiyar. |
| | 2 Krishnarája Vadiyar, |
| | 3 Bola Chamarasa Vadiyar; had two wives, Yiryammá and Demayammá. |
| 1600? | Rája Vadiya, son of the former, took Seringapatam, 1610. |
| | Bettada Chamarasa Vadiyar. |
| | Devappa rája Vadiyar, Chama rája Vadiyar, } sons of Demayamma. |

Narasa rája Vadiyar, son of first wife of Rája Vadiyar.
Chamaraja Vadiyar, his son.
Imadi Rája Vadiyar, son of Rája Vadiyar's second wife.
1638 Kanthirao Narsa rája Vadiyar, son of Bettada, acquired great power.
[Chinrayapatan inscrip. BUCH. Mysore.
1659 Doda Deva rája Vadiyar, son of Devappa, extended dominion N.W.
Chikka Deva rája Vadiyar, his son, collected family history.
1704 Kanthirao Narsa rája Vadiyar, his son.
1713 Krishna rája Vadiyar, do.
Chamaraja Vadiyar.
Imadi Krishna rája, son of Krishna.
Nanja rája Vadiyar, his son.
Chamaraja Vadiyar, dethroned by Hyder Ali; Mysore destroyed.
1796 Krishna rája Vadiyar, restored by the British.

## TABLE XLVIII.—*Paligar Dynasty of Trichinapali.*

Terumala Raya, of Achita tribe, in Tennivelly, founded dynasty.
Panchákhya.
Tondaka.
Navana Choládhipa.
Terumala Nripálachandra.
Navasauri.
Páchanara pála.
Námana.
Pachamahisu.
Kinkinipati.
Tondaka Nripati.
Tirumala Bhúpa.
Padmapta.
Raghunátha, an officer of Vijaya Rághava, of Tanjore.
Terumala ráya.
Sri Vijaya Raghunáth, conquered Chonda Khán.

## TABLE XLIX.—*Valuguti Rájas of Venkatagiri, or Kálimalé.*

From the Mackenzie MSS.

Pátalmári vetál.
Damanaidu; aided in giving Pratápa Rudra the throne of Warangol.
Vanamnaidu.
Yaradakshanaidu.
Sinha manaidu.
Madan.
Vedagiri naidu.
Kumar madan.
Sinham naidu.
Pada sinham.
Chenna sinham.
Anupota; extended sway to Krishna river.
Sarva sinh.
Dharmanaidu.
Timmanaidu.
Chiti daksha.
Anupota.
Madan.
Sura.
Yachamanaid; founded Valáguti branch.
Chenna Sinh, under Vijayanagar.
Nirván ray appa.
Kumara timma naidu.
Padakonda naidu.
Padakonda naidu II.
Chennapa naidu.
Venkatádri naidu; whence name of place.
Ráyápá.
Pennakondapa naidu.
Yachama.
A.D. Kasturi.
1600 Yacham naidu, conquered as far as the Mádura province.
Padayachem.
Kumár yachem.
Bengar yachem; murdered A.D. 1696, by Zulfikárkhán.
Kumár yachem; died 1747.
Bengar yachem, and
Padayachem, 1776.
1804 Kumar yachem, adopted.
Bengar yachem; ditto.

TABLE L.—*Indian Dynasties, according to Ferishtah, stated to be taken from Persian and Sanscrit authorities.*

[The subjoined list seems to have been compiled by Prinsep from Dow's translation of Ferishtah ('History of Hindústán,' London, 1812), whose work, often most meritoriously exact in its rendering of the original, is at times quaintly interpolated with observations, which, though appearing by the context as Ferishtah's, are in effect not to be found in his proper Persian version: under this category may be classed the dates pertaining to the ante-Muhammadan section of the Table under review. Dow's translation of this portion of the entire history labours under the additional disadvantage of having been based upon manifestly imperfect MSS., which are now susceptible of correction and amplification from the excellent lithographed copy of the Persian text published at Bombay. I have introduced a few emendations and additions from that source; but in the process of the examination necessary to this end, I have been led to form a somewhat unfavourable impression of Ferishtah's knowledge, and his power or will to sift and elucidate the traditions he inserts regarding the early dynasties of India. I am fully prepared, however, to admit that there is much curious matter to be found in his introductory chapter, which, if we could but rely upon our authority or trace up his sources of knowledge, would be well worth the deliberate scrutiny of orientalists. I intentionally abstain from entering more fully into this subject, as I am aware that the late Sir H. M. Elliot has devoted much time and attention to the illustration of this fragmentary preface; and I trust that his observations on its merits may shortly see the light in the forthcoming posthumous edition of his works now under preparation by Mr. W. H. Morley.]

(This list is useful for comparison with those already inserted.)

Maháráj; descended from Krishna (not the fabulous Brahmanical hero, but an ordinary mundane king of Hindústán, reigning in Oudh).

B.C. Faridún; first invasion of India, Málchand reigned in Málwa.

1429 Kesvarája, son of Maharáj, invades Ceylon and reduces the Dakhan with the aid of Munuchehr, king of Persia.

Manérráya, built Manér.

1209 Feroz-raí, son of Kesvarája, recovers the provinces on the Indus previously ceded to Persia.

1072 Rustam of Persia establishes Seorája dynasty at Kanauj, where worship of sun is introduced. (Dynasty survives 286 years?)

786 Baraja (36 years).

Keidar, a Brahman; tributary to Persia (19 years).

731 (died) Shunkal; built Laknauti (Gaur) in Bengal. Persian invasion under Peiranweisa, and subsequently by Afrasiáb.

Rohata, son of Shunkal (dynasty reigns for 81 years after the death of Shunkal).

586 Maharáj, Kachawa Rajputs of Amber established (reigns 40 years, contemporary with Gustasp).

540 Keda rája. Rustam Dista, the Persian Governor of the ceded Indian provinces being dead, Keda rája reduces the countries on the Indus, and fixes his residence in the city of Bera; driven back by the Kábul mountaineers.
497 Jaya chand, his general—a famine.
437 Dahlú, built Dihlí.
397 Porus, of Kemaon, usurped throne of Kanauj.
350 Porus II.; resisted Alexander's invasion.
330 Sinsar-chand (Sandracottus).
260 Jona, and his line, reigned tranquilly 90 years.
170 Kalián chand, a tyrant; kingdom of Kanauj dismembered.
56 Vikramajít (died), reigned in Málwá and Gujarát; era established;[1] anarchy and confusion succeeded.
A.D. Rája Boga (Bhoja), of the Túar tribe.
330 Basdeo (Vasudeva), revived Kanauj dynasty;[2] cotemporary of Bahramgor, who married his daughter.
410 Rámdeo, of Rhator race, fixed in Márwár; tributary to Feroz Sassan. Civil wars, took Kanauj and Bengal, married daughter of Sivaray of Vijayanagar.
500 Pratab Chand, his general, of Sesodia tribe, refused tribute to Noshirvan.
— Anand devá; reigned in Málva, built Mandô and Ramgir (stated to be contemporary of Khusrú Parviz.)
550? Maldeo; assumed throne of Dihlí, and Kanauj empire divided.[3]
— Hispál, father of
977 Jaipál, Rája of Láhore, invaded by Subuktigín and by Mahmúd.
— Anandpál succeeds, defeated by Mahmúd.
1009 Bachera (Vijaya ray) of Bhattis, invaded by Mahmúd, A.H. 393.
1012 Prithirájpál (Jaipál II.?) of Dihlí and Láhore, fled to Ajmír.
1016 Korra (Kunwer ray—Kumárapál) king of Kanauj, surrendered to Mahmúd, in whose time the country was divided into principalities.
Hardat, rája of Merat.
Chándpál or Calchandra, rája of Mathura.
Jundray?—Nanda ray of Kalinjar.
1022 Jasuverma? rája of Ajmír.
1024 Byramdeo (Brahma deva), of Gujarát deposed; and Sumnáth temple plundered.
1026 Dabisalimo (Saila deva) enthroned in his stead.
1035 Daipal, governor of Sonpat, forty miles from Dihlí on road to Láhor; in Sewálik, Rám ray, another chief.
1043 Daipal, king of Dihlí, with other rájas, retake Hansi, Tanesvar, etc., from Modood Ghiznaví.
1118 Balin, of Láhor; built Nágor in Sewálik; upset by Bairam Sháh.
1192 Pitter Rai of Ajmír, Candi (Cháwand) Rai of Dihlí } defeated Muhammad Ghori.
1193 Hindú confederacy of 150 rájas defeated by ditto.
Jay Chand, of Kanauj, defeated.
Hemraj, of Ajmír, expelled Pithiray's son.
Bhimdeva, of Gujarát; Goorkhas noticed, under Muhammed.
1215 Sahir deva of Narvar (Patán) defeated by Mahmud II.
—— Uday-sa, tributary rája of Jálwár.
1231 Rája Dewbal, of Gwalior, reduced.
1246 Dilleki and Milleki rájas, of Kalinjar.
1253 Diepal, rája of Sitnur; raised rebellion in Sind.

[1] [Dow's English text says, 'The Hindoos retain such a respect for the memory of Biker-Majit, that most of them to this day reckon their time from his death, which happened in the 89th year of the Christian era,' vol. i. p. 11. Ferishtah himself, in the Persian original, indicates this date as corresponding (at the time he was writing, A.H. 1015,) with the Hindú reckoning of 1663.]

[2] Wilford names this king Sadápála, or Sadasvápála. 'As. Res.', vol. ix. p. 211.

[3] [See extracts from Albirúní, vol. i., p. 314.]

1291 Rája of Rintinpur besieged by Feroz.
1294 Rámdeo, rája of Deogir (Daulatábád).
—— Shankaldeo, his son, married Dewal devi, daughter of Ray Karan, of Nehrwala, Gujarát; his wife, Kamlá devi.
Bhima deo, rája of Rintinbhore.
1299 Hambar deo (Hamira), his son, besieged by A'lá.
1304 Koka, rája of Málwá, overcome by Ein ul mulk.
1308 Nehr Deo, of Jálwar, surrendered to ditto.
Ray Ratan Sen, of Chitor, escaped from A'lá's camp.
—— his nephew confirmed in that principality.
Sital deo, rája of Sewana.
1309 Laddar deo, rája of Warangol, made tributary.
Bilal deo, of Karnáta, resists Tughlak 1338, founds Vijayanagar.
1318 Harpál deo, son-in-law of Rám deo, flayed.
1340 Nag nak, Koly chief of Kondhana.—Prem Ray, of Gujarát.
1347 Man deo, rája of Baglana.—Krishna ray of Vijayanagar.
1389 Ray Sarvar, rayrayan, of Behar.—Vinack ray of Telingana.
1391 Narsinh Bhan of Gwalior, Rahtor chief.—Narsinh of Kehrla.
1402 Brahma deo, son of ditto, repelled Timúr at Gwalior.
1405 Ray Davood, and Hubboo of Toolumba.
1425 Ray Bheem of Jummo.—Deva ray, of Vijayanagar.
1446 Pertáb Sinh of Patiála and Kampila, 1452 Narsinh, his son.
1452 Prithivy ráy and Karan ráy.—Bhim ráj of Condapilly.
1471 Amber ray and Mangal ray of Orissa, 1470.
1478 ———— Gwalior rája resisted Lodi.
—— Sangat Sinh, expelled from Etáwa.—Siva ray of Vijayanagar.
1490 Mán Sinh, of Gwalior, receives dress of honor.
1518 Vikramajit, his son, killed by Bábar, 1526, and Gwalior reduced after 100 years' independence.
1491 Saha deo, rája of Katra.
1493 Balbhadra ráy, of Kootumba, near Chunar. Narsinh ray, his son.
Salivahana, rája of Panná.
1501 Vinaik deo, of Dholpoor.
1528 Mán Sinh, rája of Gwalior.
1533 Rana Sanka, of Chitor (Sangráma Sinh)—finally reduced by Akbar, 1570.
Rawel deo of Bagur. Medny rája of Chandery.
Manik chand and others killed.
1540 Maldeo, of Nágore and Ajmír, most powerful rája.
1542 Harkrishna ráy, of Rotás—killed by Shír Sháh.
1554 Ramchandra, rája of Panná and Kalinjar.
1556 Hemoo usurps the throne of Dihlí—battle of Pánipat.
—— Ram-Sa, a descendant of Mán Sinh.
—— Jugmul and Devi Dás, rájás of Márwár, yield to Akbar.
1567 Ujaya Sinha, of Udipur—Surjan ráy of Rintinbhore.
1570 Chandra Sén, son of Maldeo of Ajmír.
1572 Ráy Sinh, appointed to Jodhpur by Akbar.
1586 —— his daughter married to Selim Mirza.

## TABLE LI.—*Máhratta Governments.*[1]

### I.—FAMILY OF SIVAJÍ, RÁJAS OF SATTARA.

1644 Shahjí, a Subáhdár of the Karnatic under Aurangzíb, bestows jágirs on his sons—Tanjore on Ekojí—dies 1664.
1647 Sivájí, his son, commences predatory expeditions.
1664 ———— plunders Surát, and assumes title of rája.

[1] The origin of Sivají is traced in the chronicles of Mewár to Ajaya Sinh rana of Chitor, 1300 (T. I. 269), thus: Ajayasi, Sujunsí, Duleepjí, Seojí, Bhoraji, Deoraj, Oogursén, Maholjí, Khailooji, Junkojí, Suttoojí, Sambají, Sivaji, Sambaji, Rámrája, usurpation of the Peshwás.

1669 Sivájí establishes a military government—dies 1680, April.
1630 Rája Rám, set up by minister—imprisoned at Raigarh.
—— Sambhají, assumed the sovereignty—executed at Talapur, August, 1689.
Santa, usurped power—murdered 1698.
1689 Rája Rám, again proclaimed at Sattara, died 1700.
1700 Tárá Baí, his wife, assumed regency—incursions into Behár.
1707 Sivájí II., son of Sambha, nicknamed Shao-ji, released on Aurangzíb's death, and crowned at Sattara, March 1708—goes mad.
1749 Rám Rája, nominal successor—power resting with minister or Peshwa.
1818 Pertáb Síva, or Sinh, re-instated at Sattara by British, April 11.

II.—HEREDITARY PESHWÁS OF PÚNÁ.

1740 Bálájí Bájí Rao, succeeds his father—dies after battle of Pánipat.
1761 Mádhuji Rao Belál, second son, invested as nominal Peshwá, uncle Raghunáth, regent. Nána Farnavis, his kárkun—dies November 1771.
1772 Naráyan Rao, youngest son of Bálají, murdered.
—— Rághunáth Rao (Ragoba), usurped.
1774 Mádhorao Naráyan, posthumous son of Naráyan (Nána F. in power), committed suicide 1795.
1796 Bájí Rao, proclaims himself; is taken by Sindia.
—— Chimnájí, furtively invested at Puna, 26th May.
—— Báji Rao, publicly proclaimed, 4th December.
1818 ———— surrenders to and pensioned by the English, 3rd June.

III.—BHÚNSLA RÁJAS OF NÁGPUR.

1734 Raghúji Bhúnsla, nominated 'Séna Sáhib Subá,' or general in Márhatta confederacy.
1750 ———— received sunud of Berár from Peshwá, dies 1753.
1753 Januji, eldest son, adopted his nephew.
1772 Raghuji, eldest son of Madhojí, removed by Madhorao in favour of
1774 Sabají (his uncle), killed in action soon after by Mudají.
1816 Parsájí, succeeded his father, Raghují; an idiot; strangled by
—— Múdájí (Appa Sáhib), acknowledged by English; deposed 1817–18.
1818 May. Goozur, grandson of Raghují, seated on musnud by ditto.

IV.—THE SINDIA FAMILY, FROM A VILLAGE NEAR SATARA, NOW GWALIOR RÁJAS.

1724 Ranují Sindia, an officer in the Peshwá's army.
1750 Jyapa, succeeded to his father's jágír of half of Málwá, murdered 1759.
Dáttají, second son of Ranují, engaged in the Panjáb wars.
1769 Mahádají, third, illegitimate, confirmed in jágír by Madhorao, died 1794.
1794 Doulut rao, his grand-nephew, adopted; fixed his camp at Gwalior, 1817.
1825 Baiza Bái, his widow, adopted Jankují, and acted as regent.
1833 Jankuji, assumed the reins of government.

V.—THE HOLKAR FAMILY.

1724 Mulhár Rao Holkar, a Sudra, an officer of note in the Peshwá's army.
1750 ———— obtained jágír in Málwá, died 1767.
1767 Málí Rao, grandson, succeeded under regency of
Ahilya Bái, his mother, but died soon after.
—— Tukají Holkar (no relation), appointed to command of troops.
1797 Jeswant Rao Holkar, illegitimate son, maintained predatory rule.
1805 ———— confirmed in jágír of Indore, etc., died insane.
1811 Tulsi Bái, widow, adopted his illegitimate child,
—— Mulhár Rao Holkar; battle of Mehadpur, December, 1818.
1834 Martand Rao, adopted son, dispossessed by
—— Hari Holkar, present chief.

VI.—GAIKWAR FAMILY—NOW REIGNING AT BARODA, GUJARÁT.

1720 Dammaji Gaikwár (Shamsher Behádur), officer under Khandi Rao Holkar.
1731 Pilají Gaikwar, nominated Séna Khas Khèl; murdered.

1732 Dammaji, son, occupied east of Gujarát, died 1768.
1768 Govind Rao, second son, succeeded; but eldest, Syají, an idiot, supported by
1771 Fatih Sinh, youngest, who held real power at Baroda.
1790 Mannaji Rao, assumed charge of Syaji, as regent; died 1793.
1793 Govind Rao, made regent 19th December, died September, 1800.
1800 Ananda Rao, eldest son; disputes with Mulhár and Kanhají.
1805 ——— ——— Treaty with the British Government.
——— Fatih Sinh.

## TABLE LII.—*Sikh Government of Láhore.*

A.D.
1419 Nának, founder of the Sikh sect, born.
——— Guru Angad, wrote some of the sacred books.
1552 Amera dás, Khetri.
1574 Rám dás, beautified Amritsir.
1581 Arjun Mal, compiled the 'Ádi Granth.'
1606 Har Govind, first warlike leader.
1644 Har Ray, his grandson.
1661 Har Krishna, died at Dihlí.
1664 Tegh Behádur, put to death by Moslems.
1675 Guru Govind, remodelled the Sikh Government.
1708 Bandu, last of the succession of Gurus; put to death by Aurangzib.
——— Predatory bands; internal feuds.
Twelve misals or tribes of Sikhs captured Láhore and occupied Panjáb.
Charat Sinh, of Sukálpaka misal, died 1774.
1774 Maha Sinh, his son, extended his rule; died 1792.
1792 ——— ——— his wife, regent, with Lakpat Sinh minister.
1805 Ranjít Sinh (born 1780), established Láhore independency.

# BUDDHIST GENEALOGIES.

## TABLE LIII.—*Chinese and Japanese Chronology.*

(From M. Klaproth's translation, Paris, 1833).

The Japanese names are distinguished by the letter J.

Ta chen seng wang.
I szu ma wang.
Yeon lo tho wang.
Kio lo wang.
Ni feon lo wang.
} Genealogy of Sákya, according to the Bauddha works of the Chinese.

Szu tsu kie wang (Sans. Sinhahâna-kabâna).
Tsing fan wang, Suddodana (and three brothers, Sans., Suklodana Amitidana, and Dhotodana).
B.C. 1027 Si tho to, nan tho, Chykia (Sákya muni), born.
999 Sákya becomes eminent in eighth year of Ajátasvara of Magadha.
949 Sákya or Buddha (Fo), attains nirvána (dies).
868 Anan (Ananda), second patriarch, dies.
833 A yu wang (J., A ik ô) (Sans., Asoka), dies.
806 Changna ho sieou, third patriarch, dies.
741 Yeou po kiu to (J., Ou fa kik ta), fourth patriarch, dies.
692 Thi to kia (J., Dei ta ka), fifth patriarch, dies at Mathurá.
687 Weng chu, disciple of Sáriputra.
660 Commencement of Japanese monarchy.
637 Mi chu kia (J., Mi sia ka), sixth patriarch of Magadha, dies.
604 Lao tan (J., Rô tan), founder of Tao tsu sect in China, dies.
590 Pho siu mi (J., Fa siu mi), seventh patriarch, dies in N. India.
551 Confucius, born in the kingdom of Lore.
550 500 arhans of Kashmír (ka sits mi ra) preach the law.
535 Foe tho nan ti (J., Boudz da nan dai) eighth patriarch (Sans., Boudhánandi) of Canara, dies.

487 Fou tho mi to (Sans., Boudhámita), ninth patriarch, dies.
442 Hie, tenth patriarch of Central India, dies.
383 Fo na ye che, eleventh patriarch of Palibothra, dies.
327 Ma ming ta szu, twelfth patriarch (Sans., Asvagocha) of Benares, dies.
264 Kia pi mo lo, thirteenth patriarch of West India, dies.

COMMENCEMENT OF THE TSIN DYNASTY OF CHINA.

212 Loung chou, fourteenth patriarch of Central India, dies.
161 Kia na chi pho, fifteenth patriarch of West India.
130 Ko li nan tho, makes an image of Mi le in India.
113 Lo hoei lo to, sixteenth patriarch of Kapila, dies.
74 Sang kia nan thi, seventeenth patriarch, born at Chi lo fa, dies.
13 Kia ye che to, of Ma ti, eighteenth patriarch, dies.
2 King hian fetches Buddhist scriptures from the kingdom of Yue tí.
A.D. 22[1] Kieu mo lo to, of Ferghána, nineteenth patriarch, dies.
24–57 Hindús carry Buddhist religion into Java.
65 Buddhism introduced at the Court of Ming ti, Emperor of China.
74 Tu ye to, twentieth patriarch of India, dies.
117 Pho sieou phan theou, twenty-first patriarch, dies.
165 Mo nou lo, of Nati, twenty-second patriarch, dies.
209 Ho le na, of Ferghána, twenty-third patriarch, dies.
259 Szu tsu pi khieu, of Magadha, twenty-fourth patriarch, dies.
266–313 The 'Prájna Páramita' translated into Chinese.
300 Won lo tchhu, of Khotan, translates the Fang kouang king.
325 Pho che szu to, of Ki pin or Cábul, twenty-fifth patriarch, dies.
372 Introduction of Buddhism into Kaoli (Corea).
382 Kieon mo lo chy, settles in China and translates 'Mahá Prajná.'
384 Introduction of Buddhism into Pe tsi (in Corea).
388 Pou jou my to, twenty-sixth patriarch of India, dies.
399 Chy fa hian visits India to study.
407 Introduction of Buddhism into Tibet, under Hlato tori.
414 Chy fa hian returns to Chang ngan.
429 Death of Foe fou pha tho lo, of Kapila vástu, who translated the Houyan king in China.
457 Pan jo to lo (Prajná dhara) of S. E. India, twenty-seventh patriarch, dies.
499 Pou thi ta ma (Bodhí dharma), twenty-eighth patriarch of N. India, settles in China as first patriarch of that country, dies in 508.
506 Sang kia pho lo, of Fou nan, made chief of Chinese Buddhist temples by the Emperor Siuan ven ti; dies in 525.
528 Introduction of Buddhism into Sin lo or Sinra (in Corea).
552 Ditto into Japan.
592 Death of Hoei kho ta szu, second patriarch of China.
606 Seng lin ta szu, third patriarch, dies.
629–645 Yuan honang, samanean of the Chhin family, travels in India and translates many books.
632 General introduction of Buddhism into Tibet, under Srong dbzam gampo.
651 Death of Tao tin ta szu, fourth patriarch of China.
675 Death of Houng jin ta szu, fifth patriarch of China.
676 Ti pho ho lo, priest of Magadha, visits China and translates books.
699 Chy chha nan tho, of Cábul, ditto, dies in 710.
713 Hoei neng ta szu, last patriarch of China, dies.
732 Pou koung, a brahman sramana, visits China and translates the questions of Manju Sri (Kin kang ting king).
814 (about) Phan jo, priest of Cábul, settles in China and translates the 'Houa yan king.'
854 Phan jo, made Fa pao ta szu, grand master of the treasure of religion.

[1] The Chinese MS. of the 'Bibliotheque du Roi' ends here.—M. Klaproth derives the continuation from other Chinese and Japanese authors.

## TABLE LIV.—*Buddhist Chronology of Tibet.*

From the 'Vaidúrya Karpo,' written at Hlassa in the year A.D. 1686. Translated in Csoma's 'Tibetan Grammar,' p. 181.

| | | |
|---|---|---|
| B.C. | 962 | Birth of Shakya (Chomdándás). |
| | 882 | The Kála Chakra system taught by him; his death. |
| | 881 | The 'Mula Tantra' compiled at Shambhala. |
| | 879 | Death of Zla bzang, king and author of ditto. |
| | 878 | Padma Sambhava born. |
| | 838 | Manju Ghosha born in China. |
| | 432 | Nágarjuna born. |
| | 278 | Rigs-dan-grags-pa, ascended the throne of Shambhala. |
| A.D. | 252 | Nyan-tsan, king of Tibet (Thothori), died 371. |
| | 618 | Doctrine of 'endeavouring perfection' upheld. |
| | 622 | Nam-gyal, king of Shámbhala; epoch of 403 years, called Mekha gya-tso, commenced. |
| | 627 | Srong-tsan gam-bo born. |
| | 639 | Kong-cho, a Chinese princess, arrived in Tibet. |
| | 651 | Phruk-snang college, or Vihar, built at Lhassa. |
| | 728 | Khri srong, king of Tibet. |
| | 747 | Padma Sambhava arrived in Tibet; returned to India, 802. |
| | 804 | A new astronomical period commenced. |
| | 861 | Langtarma born; abolished Buddhism, 899. |
| | 965 | Kala Chakra system introduced into India. |
| | 971 | Restoration of Buddhism. |
| | 980 | Atisha born. |
| | 1002 | Brom-ton, the teacher, born. |
| | 1015 | Sol-nag thang monastery founded. |
| | 1024 | Mekha gya-tsho era terminated. |
| | 1025 | Kala Chakra, or Jovian cycle, established in Tibet. |
| | 1038 | Milaraspa born. |
| | 1052 | Lang rithang pa born. |
| | 1055 | Ragreng college founded. |
| | 1057 | Eo-dang shesrab, the translator. |
| | 1071 | Monasteries of Sangphu and Sákya founded. |
| | 1077 | Tagpo-lha-je born. |
| | 1079 | Grathang monastery founded. |
| | 1082 | Ras-chhung pa born. |
| | 1090 | Kun-gah-nying-po, the great Sáskya Lama born; died 1156. |
| | 1108 | Phag-mo-grub-pa born. |
| | 1118 | Period of 'deep meditation' commenced. |
| | 1121 | Yubrag pa born. |
| | 1125 | Shákya Srí born. |
| | 1134 | Nyang, the prince, born. |
| | 1156 | The Thet monastery founded. |
| | 1173 | The Tshal monastery founded. |
| | 1177 | The Bri-gung monastery founded. |
| | 1178 | The Stag-lung ditto. |
| | 1180 | The great Sákya pandit born. |
| | 1185 | Gung-tang monastery founded. |
| | 1202 | Shákya Srí, of Kashmír, arrived in Tibet. |
| | 1210 | Ter-ton Lama born. |
| | 1211 | The Lang-tang monastery founded. |
| | 1223 | The Byang and Dor ditto. |
| | 1233 | Gro gon phagspa born, mastered Tibet 1251 |
| | 1253 | The Chhos-lung monastery founded. |
| | 1288 | Bu-ton born. |
| | 1300 | Ta-si-byang chhub-gyal tshan born. |
| | 1347 | Theg-chhen chhos gyal born; became Tari (king) 1347. |
| | 1347 | Thes-thang monastery founded. |

| | |
|---|---|
| A.D. 1355 | Incarnation of Tsong khapa; died 1417. |
| 1383 | Thang-tong-gyal-po born. |
| 1389 | Ge-dun-grub-pa born. |
| 1403 | Shes-rab, the great interpreter, born. |
| 1407 | Yearly confession at Lhassa established by ditto. |
| 1414 | Karma pa born; Bras-pungs Vihár founded. |
| 1417 | The Sera monastery founded. |
| 1419 | The Sang-nags-khar ditto. |
| 1421 | Dus-zhabs-nor-zang-gya-tsho born. |
| 1427 | The Nor monastery founded by the Sa-skyas. |
| 1429 | Ge-legs pal-dan succeeded to the Gal-dan chair. |
| 1433 | The Nalenda monastery was founded. |
| 1435 | The Chhab-do-byams-gling ditto. |
| 1436 | Zua-lu-legs-pa succeeded at Gal-dan. |
| 1437 | The Pal-khor chaitya built. |
| 1439 | Lotsava chhos-kyong-zang-pa born. |
| 1445 | The 'Pod-kar hal lung,' work on Lunations, etc., written. |
| 1447 | The Bras-yul monastery founded. |
| 1448 | Logros succeeded at Gal-dan. |
| 1461 | Baso ditto. |
| 1462 | The Gong-kar Vihár founded. |
| 1467 | The Ser-dog-chan ditto. |
| 1470 | The Byams-gling ditto. |
| 1471 | Logros-tan-pa succeeded at Gah-dan; died 1473. |
| 1474 | Incarnation of Gé-dun gya-tsho; died 1540. |
| 1476 | The Ta-nag thub stan-nam gyal monastery founded. |
| 1478 | Mon-lam-pal succeeded at Gah-dan. |
| 1500 | Tshar chhen born. |
| 1507 | The Chhos-khor monastery founded. |
| 1535 | Khas grub pal gyi sengè born. |
| 1541 | Snod-nams gya-tsho born; died 1586. |
| 1575 | ——————— invited by Althun khán, a Mongol prince. |
| 1576 | ——————— built the Chhos-khor-ling monastery. |
| 1587 | Yon-tan gya-tsho born; died 1614. |
| 1615 | Nag-vang lo zang gya-tsho born. |
| 1618 | Period of 'morality' commences. |
| 1625 | Rigs-dan sengé, succeeds at Gah-dan. |
| 1639 | Stan dsin chhos gyal, king of Tibet. |
| 1640 | Nag vang lo zang conquered whole of Tibet. |
| 1643 | ——————— founded the Potala (residence). |
| 1650 | ——————— visited China. |
| 1686 | This Chronology compiled at Lhassa. |

## TABLE LV.—*Kings of Tibet, to the subdivision of the country in the tenth century.*

(From the Depter non po, or ancient Records of Zhonnu Pál, in Tsang, or middle Tibet; extracted and translated by M. A. Csoma Körösi.)

*g*Nyah khri *b*tsanpo—(about two hundred and fifty years B.C.)

Khri *b*tsanpo hod*l*dé, / Mukhri *b*tsanpo. — These two names may design the same person, according to different authorities.

Dingkhri *b*tsanpo.
So khri *b*tsanpo.
Mér khri *b*tsanpo.
*g*Dags khri *b*tsanpo.
Sribs khri *b*tsanpo.
Grigum *b*tsanpo.
Spudé gung *r*gyel.
Esho legs.
Désho legs.
Thiso legs.
Guru legs.
*h*Grong zhi legs.
Isho legs.
Za nam za *l*dé.
*l*Dé *h*dul-nas *g*zhung *b*tsan.
Sé *r*nol nam *l*dé.

Sé *r*nolpo *l*dé.
*l*Dé *r*nol nam.
*l*Dé *r*nolpo.
*l*Dé *r*gyelpo.
*l*Dé Srin *b*tsan.
*r*Gyel tori long *b*tsan.
Khi *b*tsan, or Khri *d*Gah.
*d*Pungs *b*tsan.
Khri thohi *r*jes grogs *b*tsan.
Lha Thothori *g*Nyan *b*tsan—(five hundred years after the first king), A.D. 407, see Chinese list.
Khri *g*Nyan *g*zugs *b*tsan.
*h*Gro *g*Nyan *l*dem-bu.
Stagri *g*Nyan *g*zigs.
*g*Nam ri srong *b*tsan.
Srong *b*tsan *s*gampo—born A.D. 627.
Gung srong gung *b*tsan—(died before his father).
Mang srong mang *b*tsan—(son of Srong *b*tsan, etc.)
*h*Dus *s*ang mangpo *r*jé.
*k*Lung nam *b*srunggi *r*gyelpo.
Khri *l*dé *g*tsug *b*rtan més ats'hogs.
Khri srong *l*dé *b*tsan—(born A.D. 726.)
Muné *b*tsanpo.
Khri *l*dé srong *b*tsan (or Mutig *b*tsanpo.)
Ralpa chen.
Khri hum *b*tsan *d*pal. (or *k*Lang-lar ma?) A.D. 900.
*g*Nam *l*dé hod srungs—(in the 10th century; anarchy.)
*d*Pal *h*khor *b*tsan—(division of Tibet into several small principalities.)
*b*Kra shis *b*rtségs *d*pal.
Skyid *l*dé Nyima *m*gon.
*d*Palgyi *m*gon—(occupied Maryul or Ladags.
*b*Krashis *l*dé *m*gon—(took possession of Spurangs.)
*l*Dé *g*tsug *m*gon.

Then follow the names of some kings or princes who reigned in Gugé and Spurangs (or, in general, in Nári), above Garhwal and Kamaon, commencing with the tenth century. At Lé in Ladags may be found the names of the kings that successively reigned in that principality; but I could not procure them. There is great confusion in the series of the princes that reigned in Nári, and their enumeration would be of little interest. There are in Tibet several works containing lists of the descendants of Nyá khri tsánpo, the first king, whom they derive from the Litsabyi race, in India; but in different authors the orthography sometimes varies, and even the whole name is differently stated. This, which I now communicate, has been taken from the Dep-ter hon-po, 'Ancient records,' written by Zhonnu pál, a learned religious person, who lived some centuries ago, and belonged to the Sa-skya religious sect, in *g*Tsang, in Middle Tibet.—A. C.

## TABLE LVI.—*Burmese Chronological Table, translated in Crawford's Embassy.*

| B.C. | S.E. | |
|---|---|---|
| 691 | | The grand epoch established by An-ja-na, the grandfather of Gautama. |
| 628 | | Gautama born. |
| 608 | | Gautama began to reign. |
| 589 | | Gautama obtained deification (became a Buddha). |
| 551 | | Ajatasat began to reign. |
| 544 | | Gautama died and obtained nib-b'han (annihilation). |
| 543 | 1 | The sacred epoch established by king Ajatasat. |
| 520 | 24 | His son, U-da-ya-bad-da, began to reign. |
| 496 | 48 | His son, Muny-da, and after him, his son, Na-ga-da-sa. |
| 485 | 59 | Maha Sam-b'ha-wa. |
| 478 | 66 | His younger brother, Chula Sam-b'ha-wa, began to reign. |
| 472 | 72 | Su-sa-na-ga, in Maj-ji-ma (Central India). |
| 453 | 91 | His son, Ka-la-san-ka, in Maj-ji-ma. |
| 443 | 101 | Twat-ta-paong, the founder of Sa-re-k'het-ta-ra (or Ras-se Myo, vulgarly called Prome). |
| 426 | 118 | His son, Bat-la-se-na, in Maj-ji-ma. |
| 404 | 140 | Nan-da began to reign, and was followed by eight kings of the same name, in Maj-ji-ma. |
| 392 | 162 | Chan-ta-kut-ta, in Maj-ji-ma (Chandragupta). |

| B.C. | S.E. | |
|---|---|---|
| 376 | 168 | His son, Bin-tu-sa-ra, in Maj-ji-ma. |
| 373 | 171 | His son, Twat-ta-ram, in Prome. |
| 351 | 193 | His son, Ram-b'haong, in Prome. |
| 330 | 214 | His son, D'ham-ma-sau-ka, in Maj-ji-ma. |
| 326 | 218 | D'ham-ma-sau-ka received the sacred affusion (Ab'hi-se-sa). |
| 320 | 224 | Prince Ma-hin-d'ha became a priest (Rahan), and his sister, Princess San-g'ha-mit-ta, a priestess (Rahan). |
| 307 | 237 | The period of the third rehearsal of the communications of Gautama. The priest Ma-hin-d'ha went on a religious mission to Si-ho (Ceylon). |
| 301 | 243 | Ra-han-man, son of D'ham-ma-sau-ka, began to reign in Prome. |
| 289 | 255 | Death of D'ham-ma-sau-ka (literally, 'his going to heaven'). |
| 251 | 293 | His son or grandson, Kak-k'han, began to reign in Prome. |
| 219 | 325 | His son, Khan-laong, in Prome. |
| 182 | 362 | His son, Lak-k'hong, in Prome. |
| 148 | 396 | His son, Si-k'han, in Prome. |
| 118 | 426 | His son, Si-ri-rak, in Prome. |
| 111 | 436 | Ta-pa-mang, in Prome. |
| 94 | 450 | The communications of Gautama reduced to writing in Ceylon. |
| 60 | 484 | Ta-pa-man's son, Pi-ram, in Prome. |
| 39 | 505 | Ram-mak-k'ha in Prome, and his son, |
| A.D. | | |
| 21 | 565 | Ram-sin-ga, in Prome, and his son. |
| 54 | 568 | His son, Ram-mun-cha-lin-da, in Prome. |
| 39 | 583 | His brother, Be-rin-da, in Prome. |
| 54 | 598 | His son, Mun-ja, in Prome. |
| 56 | 600 | His son, Pu-nyan-nya, in Prome. |
| 59 | 603 | His brother, Sa-k'ha, in Prome. |
| 62 | 606 | Sa-k'hi, in Prome. |
| 65 | 609 | His younger brother, Kan-un, in Prome. |
| 66 | 610 | His elder brother, Kan-tak, in Prome. |
| 69 | 613 | His elder brother, Bin-ja, in Prome. |
| 73 | 617 | His son, Su-mun-dri, in Prome. |
| | P.E. | |
| 76 | 1 | The Prome epoch, established by king Su-mun-dri. |
| 80 | 2 | His son, Ati-tra, in Prome. |
| 83 | 5 | His brother, Su-panya-na-ga-ra-chin-na, in Prome. |
| 94 | 16 | Death of king Su-panya-na-ga-ra-chin-na. |
| 107 | 29 | Sa-mud-da-raj began to reign in Pugan. |
| 152 | 74 | Ras-se-kyaong, in Pugan. |
| 167 | 89 | Phru-chau-ti, in Pugan. |
| 242 | 164 | His son, T'himany-rany, in Pugan. |
| 299 | 221 | His son, Rang-mang-pok, in Pugan. |
| 324 | 246 | His son, Pok-san-lany, in Pugan. |
| 386 | 308 | Bud-d'ha-gau-sa went to Ceylon. |
| 387 | 309 | Pok-sang-lany's son, Kyaong-du-raeh, began to reign. |
| 412 | 334 | His son, Sany-t'han. |
| 469 | 391 | Muk-k'ha-man and Su-rai. |
| 494 | 416 | Sany-t'han's great grandson, Ra-mwan-mya. |
| 516 | 438 | Sok-ton. |
| 523 | 445 | His son, Sang-lang-kyaung-ngai. |
| 532 | 454 | His brother, Sang-lang-pok. |
| 547 | 469 | His brother, K'han-laong. |
| 557 | 579 | His brother, K'han-lap. |
| 569 | 491 | His son, T'hwan-t'hok. |
| 582 | 504 | His son, T'hwan-prach. |
| 498 | 520 | His son, T'hwan-khyach. |
| 613 | 535 | Pup-pa-chau-ra-han. |
| | V.E. | |
| 639 | 1 | The present vulgar epoch established by Pup-pa-chau-ra-han. |
| 640 | 2 | His son-in-law, Shwe-bun-si, succeeded. |
| 652 | 14 | His brother, Pis-sun. |

| A.D. | B.E. | |
|---|---|---|
| 660 | 22 | His son, Pit-taung. |
| 710 | 72 | His brother, Na-k'hwe. |
| 716 | 78 | Myang-ka-kywe. |
| 726 | 88 | Sing-ga. |
| 734 | 96 | Sing-k'hwan. |
| 744 | 106 | His son, Shwe-laung. |
| 753 | 115 | His son, T'he-wan-twang. |
| 762 | 124 | His son, Shwe-mauk. |
| 766 | 128 | His son, Chau-k'hang-nach. |
| 785 | 147 | His brother, T'hwan-lwat. |
| 829 | 191 | His son, K'hai-lu. |
| 846 | 208 | His brother, Pyany-bya. |
| 864 | 226 | His son, Tan-nak. |
| 889 | 251 | Sin-chwan, and his brother, Cha-le-nga-kwe. |
| 914 | 276 | His son, Sing-g'ho. |
| 930 | 292 | Taung-su-kri (the mountain chief) |
| 945 | 307 | Kwan-chau Kraung-pru. |
| 966 | 328 | His son, Kraung-cho. |
| 972 | 334 | His brother, Chuck-ka-té. |
| 997 | 359 | Kraung-p'haus'son Nau-ra-t'ha-chau. |
| 1030 | 392 | His son, Chau-lu. |
| 1056 | 418 | Kyan-chach-sa. |
| 1081 | 443 | His grandson, Maun-chany-su. |
| 1151 | 513 | His son, Ku-la-kya. |
| 1154 | 516 | His son, Mang-rai-na-ra-sung-ga. |
| 1157 | 519 | His brother, Na-ra-pa-ti-chany-su. |
| 1190 | 552 | His son, Je-ya-sing-ga, or Nan-taung-mya-mang. |
| 1212 | 574 | His son, Kya-chwa. |
| 1227 | 589 | His son, Uch-cha-na. |
| 1233 | 595 | His brother, Mang-k'hen-k'hye. |
| 1277 | 639 | His son, Kyany-chwa. |
| 1291 | 653 | His son, Chau-nach. |
| 1300 | 662 | Ta-chi-shang-si-ha-su, in Panya. |
| 1313 | 675 | His son, Chau-mwan-nach, in Panya. |
| 1322 | 684 | His son, Uch-cha-na. This year Asang-k'ha-ra-chau-kwan founded Chit-kaing, and began to reign. |
| 1330 | 692 | His elder brother, Ta-ra-bya-kri, in Chit-kaing Sagaing. |
| 1342 | 704 | His younger brother, Na-chi-shang-kyany-chwa, in Chit-kaing. |
| 1351 | 713 | His son, Kyany-chwa, in Chit-kaing. |
| 1356 | 718 | Chau-mwan-nach died, and Pugan was destroyed. |
| 1362 | 723 | Kyany-chwa's brother, Mau-pa-na-ra-su, in Chit-kaing. |
| 1364 | 726 | His elder brother, Uch-cha-na-praung, in Chit-kaing. This year Sa-to-mang-bya founded Angwa (Ava), and began to reign; Chit-kaing and Panya were destroyed. |
| 1377 | 739 | His father-in-law, Many-kri-chwa, in Ava. |
| 1401 | 763 | His son, Ta-sa-bya-kri, in Ava, succeeded the same year by Mang-kaung the First. |
| 1422 | 784 | His son, Chany-pru-shang-si-ha-su, in Ava. |
| 1425 | 787 | His son, Many-t'ha-gray, in Ava, succeeded the same year by Ka-le-kye-ngo. |
| 1426 | 788 | Mo-n'hany-mang-ta-ra, in Ava. |
| 1439 | 801 | His son, Mang-rai-kyany-chwa, in Ava. |
| 1442 | 804 | His brother, Na-ra-pa-ti-kri, in Ava. |
| 1468 | 830 | His son, Mang-k'haung the Second, in Ava. |
| 1501 | 863 | His son, Shwe-nan-kyany-shang, in Ava (proper name, Na-ra-pa-ti.) |
| 1526 | 888 | Mo-n'hany-so-hau-pwa, in Ava. |
| 1541 | 903 | Un-b'haung-chan-b'hwa, in Ava. |
| 1546 | 908 | His son, Mo-bya-na-ra-pa-ti, in Ava. |
| 1551 | 913 | Cha-kong-chany-su-kyaoy-taung, or Na-ra-pa-ti-gan, in Ava. |
| 1554 | 916 | Sa-to-mang-chau, in Ava. |

| A.D. | V.E. | |
|---|---|---|
| 1565 | 927 | Prany-chun-mang-rai-kyany-chwa, in Ava. |
| 1597 | 959 | Nyaung-ram-man-kri, in Ava. |
| 1605 | 967 | His son, Anauk-pak-lwan-mang-ta-ra-kri, in Ava. |
| 1629 | 990 | Sa-lwan in Ava. |
| 1648 | 1010 | His son, Na-dat-da-ya-ka, in Ava. |
| 1661 | 1023 | His brother, Prung-mang, in Ava. |
| 1672 | 1034 | His son, Na-ra-wara, in Ava; succeeded the same year Mang-rai-kyany-tang, grandson of Sa-lwan. |
| 1698 | 1060 | His son, Man-aung-ra-da-nga-da-ya-ka, in Ava. |
| 1714 | 1076 | His son, Chang-p'hru-shang, in Ava. |
| 1733 | 1095 | His son, K'haung-thit, carried captive to Han-sa-wati. |
| 1752 | 1114 | Alaung-b'hu-ra (Alompra) began to reign at Mut-cho-bo (Monchabo). |
| 1760 | 1122 | His son, U-pa-ra-ja, at Chit-kaing. |
| 1763 | 1125 | His brother, Chany-p'hru-shang (Sembuen), at Ava. |
| 1776 | 1138 | His son, Chany-ku-cha, at Ava. |
| 1781 | 1143 | His cousin, Paung-ka-cha, commonly called Maung-mang, son of U-pa-ra-ja, at Ava; succeeded the same year by his uncle, Pa-dun-mang, or Man-ta-ra-kri, son of A-laung-b'hu-ra, and founder of A-ma-ra-pu-ra. |
| 1819 | 1181 | His present Majesty, grandson of Pa-dun-mang, ascended the throne at A-ma-ra-pu-ra. |
| 1822 | 1184 | Ava rebuilt, and made the capital. |

## TABLE LVII.—*Chiefs of Labong and Zimmay.*—(*Northern Laos of Europeans*; *Yeun Shan of the Burmese.*)

From the Native Records consulted by Dr. D. Richardson, 1834. MS.

| A.D. | S.E. | |
|---|---|---|
| | | Bud. |
| 576 | 1118 | Wathoo daywa (Vásudeva) and Taka danda, founded Labong. |
| 578 | 1120 | Placed Vamá on the throne (or Zamma devi), daughter of the king of Chandapur, widow of Cambodia rája. |
| | | 35 Kings, or 'Lords of the White Elephant.' |
| | | Aditza-woon-tha built the Pagoda. |
| | | 19 kings to |
| | V.E. | Bénya men yea (in Burmese, Dolana). |
| 1289 | 651 | Benya tso men yea, changed the capital; thrice married into Pegu family. |
| 1294 | 656 | Benya—founded Zimmay. |
| 1331 | 693 | Nga then patchoon, his son. |
| 1333 | 695 | No tchoon ta yung. |
| 1334 | 696 | Na tchoon tareung. |
| 1336 | 698 | Ngathenpoo. |
| 1345 | 707 | Tso kanprú. |
| 1347 | 709 | Tso boa you. |
| 1369 | 731 | Goona. |
| 1377 | 739 | Gnathen numa. |
| 1380 | 742 | Thambi. |
| 1420 | 782 | Tso Benya. |
| 1455 | 817 | Tso neat. |
| 1463 | 825 | Benya yothee. |
| 1503 | 865 | Tso myn ar. |
| 1537 | 899 | Benya tsay. |
| 1542 | 904 | Tso myne. |
| 1544 | 906 | Zalapaba, his daughter, called there tha Dama mahadevi. |
| 1558 | 920 | Len bue mya shee, king of Pegu, took the town. |
| —— | —— | His son, Narata 'tso. |
| 1628 | 990 | Ladong family restored. |
| 1630 | 992 | Thadau dama yaza of Pegu regained it. |

| A.D. | V.E. | |
|---|---|---|
| 1763 | 1125 | Nso oung recovered his independence. |
| —— | —— | Lenbu Sheen, son of Alompra of Ava, took it. |
| 1774 | 1136 | Benya sa Ban rebelled, threw off Burmese yoke, and joined Bankok allegiance. |
| 1778 | 1140 | Chou chee weet, present king. |

## TABLE LVIII.—*Sovereigns of Ceylon.*

From the 'Ceylon Almanack,' the Honorable George Turnour's Epitome.

| B.C. | Names. | Relationship of each succeeding sovereign. |
|---|---|---|
| 543 | Wejaya (Vijaya) | The founder of the Wejayan dynasty. |
| 505 | Oopatissa I. | Minister; regent. |
| 504 | Panduwaasa | Paternal nephew of Wejaya. |
| 474 | Abhaya | Son of Panduwaasa; dethroned. |
| 454 | Interregnum. | |
| 437 | Pandukaabhaya (capital Anuradhpura) | Maternal grandson of Panduwaasa. |
| 367 | Mootaseewa | Paternal grandson. |
| 307 | Devenipeatissa | Second son. |
| 267 | Oottiya | Fourth son of Mootaseewa. |
| 257 | Maha-seewa | Fifth ditto. |
| 247 | Suratissa | Sixth ditto; put to death. |
| 237 | Sena and Goottika | Foreign usurpers; put to death. |
| 215 | Asela | Ninth son of Mootaseewa; deposed. |
| 205 | Elaala | Foreign usurper; killed in battle. |
| 161 | Dootoogaimoonoo | Son of Kaawantissa. |
| 137 | Saidaitissa | Brother. |
| 119 | Toohl or Thullathanaka | Younger son; deposed. |
| 119 | Laiminitissa I. or Lajjetissa | Elder brother. |
| 109 | Kaloonna or Khallaata Naaga | Brother; put to death. |
| 104 | Walagambahoo I. or Wattagaamini | Brother; deposed. |
| 103 | Pulahattha (usurpers) | 14. 7—Foreign usurpers; successively deposed and put to death. |
| 100 | Baayiha | |
| 98 | Panaymaaraa | |
| 91 | Peliyamaaraa | |
| 90 | Daathiya | |
| 88 | Walagambahoo I. | Reconquered the kingdom. |
| 76 | Mahadailitissa or Mahachoola | Son. |
| 62 | Choora Naaga | Son; put to death. |
| 50 | Kooda Tissa | Son; poisoned by his wife. |
| 47 | Anoola | Widow. |
| 41 | Makalantissa or Kallakanni Tessa | Second son of Koodatissa. |
| 19 | Baatiyatissa I. or Baatikaabhaya | Son. |
| A.D. | | |
| 9 | Mahadailiya Maana or Daathika | Brother. |
| 21 | Addagaimoono or Aamanda Gaamini | Son; put to death. |
| 30 | Kinihirridailla, or Kanijaani Tissa | Brother. |
| 33 | Kooda Abhaa or Choolaabhya | Son. |
| 34 | Singhawallee or Seewalli | Sister; put to death. |
| 35 | Interregnum. | |
| 38 | Elloona, or Ila Naaga | Maternal nephew of Addagaimoono. |
| 44 | Sanda Moohoona, or Chanda Mukha Seewa | Son. |
| 52 | Yasa Siloo, or Yataalakatissa | Brother; put to death. |
| 60 | Subha | Usurper; put to death. |
| 66 | Wahapp, or Wasahba | Descendant of Laiminitissa. |
| 110 | Waknais, or Wanka Naasika | Son. |
| 113 | Gajaabahoo I. or Gaamini | Son. |

| A.D. | Names. | Relationship of each succeeding sovereign. |
|---|---|---|
| 125 | Mahaloomaana, or Mallaka Naaga... | Maternal cousin. |
| 131 | Baatiya Tissa II. or Bhaatika Tissa | Son. |
| 155 | Choola Tissa, or Kanittha Tissa ... | Brother. |
| 173 | Koohoona, or Choodda Naaga ..... | Son; murdered. |
| 183 | Koodanaama or Kooda Naaga ..... | Nephew; deposed. |
| 184 | Kooda Sirinaa, or Siri Naaga I..... | Brother-in-law. |
| 209 | Waiwahairatissa, or Wairatissa..... | Son; murdered. |
| 231 | Abha Sen, or Abha Tissa ..... | Brother. |
| 239 | Siri Naaga II..... | Son. |
| 241 | Weja Indoo, or Wejaya II..... | Son; put to death. |
| 242 | Sangatissa I. ..... | Descendant of Laiminitissa; poisoned. |
| 246 | Dahama Sirisanga Bo, or Sirisanga Bodhi I..... | Ditto; deposed. |
| 248 | Goloo Abhaya, Gotha Abhaya, or Meghawarna Abhaya ..... | Ditto. |
| 261 | Makalan Detoo Tissa I. ..... | Son. |
| 275 | Maha Sen..... | Brother. |
| 302 | Kitsiri Maiwan I. or Kirtissri, Meghawarna ..... | Son. |
| 330 | Detoo Tissa II..... | Brother. |
| 339 | Bujas or Budha Daasa ..... | Son. |
| 368 | Oopatissa II..... | Son. |
| 410 | Maha Naama ..... | Brother. |
| 432 | Senghot or Sotthi Sena ..... | Son; poisoned. |
| 432 | Laimini Tissa II., or Chatagaahaka | Descendant of Laimini Tissa. |
| 433 | Mitta Sena, or Karalsora ..... | Not specified; put to death. |
| 434 | Paandu..... | 24. 9→Foreign usurpers. |
| 439 | Paarinda Kooda ..... | |
| 455 | Khudda Paarinda ..... | |
| 455 | Daatthiya..... | |
| 458 | Pitthiya ..... | |
| 459 | Daasenkelleya, or Dhaatu Sena..... | Descendant of the original royal family; put to death. |
| 477 | Sigiri Kasoomboo, or Kaasypa I. ... | Son; committed suicide. |
| 495 | Moogallaana I. ..... | Brother. |
| 513 | Koomaara Daas, or Koomaarau Dhaat Sena ..... | Son; immolated himself. |
| 522 | Kirti Sena ..... | Son; murdered. |
| 531 | Maidi Siwoo, or Siwaka..... | Maternal uncle; murdered. |
| 531 | Laimini Oopatissa III..... | Brother-in-law. |
| 534 | Ambaherra Salamaiwan, or Silaa-kaala. ..... | Son-in-law. |
| 547 | Daapuloo I. or Daatthaapa Bhodoi... | Second son; committed suicide. |
| 547 | Dalamagalan, or Moogallaana II. ... | Elder brother. |
| 567 | Kuda Kitsiri Maiwan I. or Kirtissri Meghawarna ..... | Son; put to death. |
| 586 | Senewi, or Maha Naaga ..... | Descendant of the Okaaka branch. |
| 589 | Aggrabodhi I. or Akbo ..... | Maternal nephew. |
| 623 | Aggrabodhi II. or Soola Akbo ..... | Son-in-law. |
| 633 | Sanghatissa ..... | Brother; decapitated. |
| 633 | Boona Moogalan, or Laimini Bo-naaya ..... | Usurper; put to death. |
| 639 | Abbaseggaaheka, or Asiggaaheka ... | Maternal grandson. |
| 648 | Siri Sangabo II. ..... | Son; deposed. |
| 648 | Kaloona Detootissa, or Laimina Katooreya..... | Descendant of Laimini Tissa; committed [suicide. |
| 649 | Siri Sangabo II. ..... | Restored, and again deposed. |
| 665 | Daloopeatissa I. or Dhatthopatissa | Laimini branch; killed in battle. |
| 677 | Paisooloo Kasoombo, or Kaasaypa II. | Brother of Sirisangabo. |
| 686 | Dapuloo II. ..... | Okaaka branch; deposed. |

| A.D. | Names. | Relationship of each succeeding sovereign. |
|---|---|---|
| 693 | Daloopeatiss II. or Hattha-Datthopatissa | Son of Daloopeatissa I. |
| 702 | Paisooloo Siri Sanga Bo III. or Aggrabodhi | Brother. |
| 718 | Walpitti Wasidata, or Dantanaama | Okaaka branch. |
| 720 | Hoonnonara Riandalaor Hatthadatha | Original royal family; decapitated. |
| 726 | Mahalaipaanoo, or Maanawamma | Ditto. |
| 726 | Kaasiyappa III. or Kasoombo | Son. |
| 729 | Aggrabodhi III. or Akbo | Nephew. |
| 769 | Aggrabodhi IV. or Kuda Akbo | Son (capital Pollonnaroowa). |
| 715 | Mihindoo I. or Salamaiwan | Original royal family. |
| 795 | Dappoola II. | Son. |
| 800 | Mihindo II. or Dharmika-Seelaamaiga | Son. |
| 804 | Aggrabodhi V. or Akbo | Brother. |
| 815 | Dappoola III. or Kuda Dappoola | Son. |
| 831 | Aggrabodhi VI. | Cousin. |
| 838 | Mitwella Sen, or Selaamaiga | Son. |
| 858 | Kaasiyappa IV. or Maaganyin Sena, or Mihindoo | Grandson. |
| 891 | Udaya I. | Brother. |
| 926 | Udaya II. | Son. |
| 937 | Kaasiyappa V. | Nephew and son-in-law. |
| 954 | Kaasiyappa VI. | Son-in-law. |
| 964 | Dappoola IV. | Son. |
| 964 | Dappoola V. | Not specified. |
| 974 | Udaya III. | Brother. |
| 977 | Sena II. | Not specified. |
| 986 | Udaya IV. | Ditto. |
| 994 | Sena III. | Ditto. |
| 997 | Mihindoo III. | Ditto. |
| 1013 | Sena IV. | Son; minor. |
| 1023 | Mihindoo IV. | Brother; carried captive to India during the Soleean conquest. |
| 1059 | Interregnum | Soleean vice-royalty. |
| 1071 | Wejayabahoo I. or Sirisangabo IV. | Grandson of Mihindoo IV. |
| 1126 | Jayabahoo I. | Brother. |
| | Wikramabahoo I. | |
| 1127 | Gajaabahoo II | A disputed succession. |
| 1153 | Prakramabahoo I. | Son of Maanaabarana. |
| 1186 | Wijayabahoo II. | Nephew; murdered. |
| 1187 | Mihindoo V. or Kitsen Kisdaas | Usurper; put to death. |
| 1187 | Kirti Nissanga | A prince of Kaalinga. |
| 1196 | Werabahoo | Son; put to death. |
| 1196 | Wikramabahoo II. | Brother of Kirti Nissanga, put to death. |
| 1196 | Chondakanga | Nephew; deposed. |
| 1197 | Leelawati | Widow of Prakramabahoo; deposed. |
| 1200 | Saahasamallawa | Okaaka branch; deposed. |
| 1202 | Kalyaanawati | Sister of Kirti Nissanga. |
| 1208 | Dharmaasooka | Not specified; a minor. |
| 1209 | Nayaanga or Nikanga | Minister; put to death. |
| 1209 | Leelawati | Restored, and again deposed. |
| 1210 | Lokaiswera I. | Usurper; deposed. |
| 1211 | Leelawati | Again restored, and deposed a third time. |
| 1211 | Pandi Prakrama Bahoo II. | Usurper; deposed. |
| 1214 | Maagha | Foreign usurper. |
| 1235 | Wejayabahoo III. (cap. Dambadinia) | Descendant of Sirisangabo I. |
| 1266 | Kalikaala Sahitya Sargwajnya, or Paandita Prakrama Bahoo III. | Son. |

| A.D. | Names. | Relationship of each succeeding sovereign. |
|---|---|---|
| 1301 | Bosat Wejaya Bahoo IV. | Son. |
| 1303 | Bhuwaneka Bahoo I. | Brother. |
| 1314 | Prakrama Bahoo III. | Son of Bosat Wejaya Bahoo. |
| 1319 | Bhuwaneka Bahoo II. (at Hastisailapura) | Son of Bhuweneka Bahoo. |
| | Pandita Prakrama Bahoo IV. | Not specified. |
| | Wanny Bhuwaneka Bahoo III. | |
| | Wejaya Bahoo V. | |
| 1347 | Bhuwaneka Bahoo IV. (at Gampala) | |
| 1361 | Prakrama Bahoo V. | |
| 1371 | Wikram Bahoo III. (at Kandy) | Cousin. |
| 1378 | Bhuwaneka Bahoo V. | Not specified. |
| 1398 | Wejaya Bahoo V. or Weera Bahoo | |
| 1410 | Siri Prakrama Bahoo VI. (at Kotta) | |
| 1462 | Jayaa Bahoo II. | Maternal grandson; put to death. |
| 1464 | Bhuwaneka Bahoo VI. | Not specified. |
| 1471 | Pandita Prakrama Bahoo VII. | Adopted son. |
| 1485 | Wira Prakrama Bahoo VIII. | Brother of Bhuwaneka Bahoo VI. |
| 1505 | Dharma Prakrama Bahoo IX. | Son. |
| 1527 | Wejaya Bahoo VII. | Brother; murdered. |
| 1534 | Bhuwaneka Bahoo VII. | Son. |
| 1542 | Don Juan Dharmapaala | Grandson. |
| | A Malabar, at Yapahoo. | |
| | Portuguese at Colombo. | |
| | Weediye Rája, at Pailainda Nowera. | |
| | Raajasingha, at Aiwissawelle. | |
| | Idirimaaney Suriya, at Seven Korles. | |
| | Wikrama Bahoo, at Kandy. | |
| 1581 | Raajasingha I. | Son of Maayaadunnai. |
| 1592 | Wimala Dharma | Original royal family. |
| 1604 | Senaaratena, or Senerat | Brother. |
| 1635 | Raajasingha II. | Son. |
| | Koomaara-singa | Brother. |
| | Wijaya Paala | Brother. |
| 1685 | Wimila Dharma Suriya II. | Son of Raajasingha. |
| 1707 | Sriwira Prakrama Narendra-singha, or Koondasaala | Son. |
| 1739 | Sriwejaya Raajasingha, or Hanguranketta | Brother-in-law. |
| 1747 | Kirtisri Raajasingha | Brother-in-law. |
| 1781 | Raajaadhi Raajasingha | Brother. |
| 1798 | Sree Vikrama Raajasingha | Son of the late king's wife's sister, deposed by the English, and died in captivity. |

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In the native mode of recording the lengths of individual reigns, without refering them to a fixed epoch, anachronisms are unavoidable: Mr. Turnour has judiciously applied the following fixed points to correct the foregoing table.

| | | |
|---|---|---|
| B.C. | 543 | The landing of Vijaya, in the year of Buddha's death. |
| | 307 | The mission from Dharmásoka to establish Buddhism in Ceylon. |
| | 104 | The conquest of Ceylon by the Malabars. |
| | 90 | The founding of Abhayagiri by Wala gaurbahu. |
| A.D. | 209 | The date of the Vaitúliya heresy, in Vaivahara's reign. |
| | 252 | The revival of ditto, in the reign of Golú Abhaa. |
| | 301 | Death of Makasen, 4 years anachronism. |
| | 545 | Another revival of the Vaitúliya heresy, in Ambakira's reign. |
| | 838 | Origin of the Vijra waadiya heresy, in Mitwella Sén's reign. |
| | 1153 | The accession of Prákrama Báhú, 6 years anachr. |

A.D. 1200 Ditto of Sahasa Mallawa, by Dambulla rock inscription, A.B. 1473.
1266 Ditto of Pandita Prâkrama Bâhû III., error seven years.
1347 Ditto of Bhuwaníka Bâhú IV.

In the remaining portion of the history of Ceylon, other materials have not been wanting for the adjustment of its chronology.

TABLE LIX. *Greek dynasties in Asia, founded after the death of Alexander the Great, by his Generals, etc.*

SYRIA.

| B.C. | | B.C. | |
|---|---|---|---|
| 334 | Alexander the Great; born, 356; died, 323. | 137 | Antiochus VII. Sidetes. |
| 312 | Seleucus I. Nicator. | 128 | Alexander II. Zebina. |
| 280 | Antiochus I. Soter. | 125 | Seleucus V. |
| 261 | Antiochus II. Theos. | 125 | Antiochus VIII. Grypus. |
| 246 | Seleucus II. Callinicus. | 112 | Antiochus IX. Cyzicenus. |
| 226 | Seleucus III. Ceraunus. | 96 | Seleucus VI. Epiphanes. |
| 223 | Antiochus III. Magnus. (Achæus.) | 95 | Antiochus X. Eusebes. Antiochus XI. Epiphanes Philip, and |
| 187 | Seleucus IV. Philopator. | 94 | Demetrius III. Eucærus. |
| 175 | Antiochus IV. Epiphanes. | 88 | Antiochus XII. (Dionysius of Josephus). |
| 164 | Antiochus V. Eupator. | 83 | Tigranes, of Armenia. |
| 162 | Demetrius I. Soter. | 69 | Antiochus XIII. Asiaticus. |
| 150 | Alexander I. Bala. | 65 | Syria became a Roman province. |
| 147 | Demetrius II. Nicator. | | |
| 144 | Antiochus VI. Theos. | | |
| 142 | Tryphon. | | |

PARTHIA.

| B.C. | | A.D. | |
|---|---|---|---|
| 255[1] | Arsaces I. | | (Cinnamus.) |
| 253 | Tiridates * I. | | (Artabanus III.) |
| 216 | Artabanus I. | 42 | Bardanes. |
| 196 | Phraapatius. | 45 | Gotarzes. |
| 181 | Phrahates I. | 50 | (Meherdates). |
| 173 | Mithradates I. | 51 | Vonones II. |
| 136 | Phrahates II. | 51 | Vologeses I. |
| 126 | Artabanus II. | 62 | (Artabanus IV.) |
| 123 | Mithradates II. | 77 | Pacorus. |
| 87 | Mnaskires. | 108 | Chosroes. |
| 77 | Sinatroces. | 115 | (Parthamaspates). |
| 70 | Phrahates III. | 116 | (Chosroes restored). |
| 60 | Mithradates III. | 121 | Vologeses II. |
| 54 | Orodes I. | 148 | Vologeses III. |
| 37 | Phrahates IV. (Tiridates II.) (Phrahates IV.) | 192 | (Vologeses IV.) |
| | | 209 | (Vologeses V.) Artabanus V. |
| A.D. 4 | Phrahataces. | 235 | Artaxerxes, King of Persia, 1st of the Sassanidæ. (See table LXI). |
| 5 | Orodes II. | | |
| 5 | Vonones I. | | |
| 13 | Artabanus III. (Tiridates III.) | | |

KNOWN KINGS OF BACTRIA.

[I have omitted this list of Prinsep's, which was necessarily less complete than the elaborated series already inserted at p. 173, vol ii. of this work]

[1] The dates in this list, as well as the new names inserted in brackets, are taken from Mr. Lindsay's work on Parthian coinages. The titles of the kings appended to Prinsep's note * are also corrected up from the same authority.]

* The family name Arsaces is applied to all the princes of Parthia, hence called

## TABLE LIXa.—*Arsacidan Kings of Armenia, according to Moses of Chorene.*

| B.C. | | | Years. | |
|---|---|---|---|---|
| 149 | 130 | Valarsaces ..... reigned | 22 | Vaghurshag. |
| 127 | 108 | Arsaces I. ..... | 23 | |
| 104 | 95 | Artases I. ..... | 25 | |
| 89 | 70 | Tigranes II. ..... | 33 | 19th year of Arsaces III. |
| 55-36 | 34 | Artavasdes I. ..... | | |
| | 20 | Arsamus ..... | 20 | 20th of Arses. |
| | 4 | Abgarus ..... | 38 | 20th of Arsavirus. |
| | 35 | Sanatruces ..... | 30 | |
| | 65 | Eruandus II. ..... | 21 | 8th of Darius. |
| | 86 | Artases II. ..... | 43 | 29th ditto. |
| | 129 | Artavasdes II. ..... | few days. | |
| | 129 | Tiranus I. ..... | 21 | 3rd of Feroz I. |
| | 150 | Tigranes III. ..... | 42 | |
| | 192 | Valarses ..... | 33 | 30th of Valarses. |
| | 225 | Chosroes I. ..... | 47 | 2nd of Artabanus. |
| | 272 | Interregnum under Artasires and Sapor Sassan. | | |
| | 286 | Tiridates ..... (Intervallum). | 56 | 3rd of Diocletian. |
| | 337 | Chosroes II. ..... | 9 | 8th of Constantius. |
| | 353 | Tiranus II. ..... | 11 | |
| | 364 | Arsaces II. ..... | 30 | |
| | 394 | Papus ..... | 7 | |
| | 401 | Varasdates ..... | 4 | 20th Theodosius. |
| | 406 | Arsaces III. ..... | 5 | |
| | 411 | Chosroes III. ..... | 5 | |
| | 416 | Veramus Sapores ..... | 21 | |
| | 437 | Chosroes III. restored ..... | 1 | |
| | 438 | Sapores ..... | 4 | |
| | 442 | Interregnum. | | |
| | 444 | Artasires ..... | 6 | |
| | 450 | The Armenian kingdom extinguished.—J.P. | | |

## TABLE LX.—*Mythological Period of Persian History.*

PESHDÁDIAN DYNASTY.

Kaiumars, by some supposed to be Adam, or Noah, reigned at Balkh.
Siamek, his son.
Hoshang.
Thamurath, surnamed Deobaud.
Jamshíd, reigned at Persepolis.
Zohák, surnamed Alvani, an invader.
Feridún, restored by Kawa the blacksmith.
Iráj.
Koshang.
Manuchehr.
Naudar.
Afrasiáb, king of Túrkistán
Zab, brother of Naudar.
Ghorshasp.

the Arsacidæ, and is almost the only one visible on their coins. [Their coin titles (usually occurring in the genitive case) are—ΒΑΣΙΛΕΩΣ, ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ, ΒΑΣΙΛΕΥΟΝΤΟΣ ΒΑΣΙΛΕΩΝ, ΒΑΣΙΛΕΩΣ ΘΕΑΣ ΟΥΡΑΝΙΑΣ, ΜΕΓΑΛΟΥ, ΘΕΟΠΑΤΟΡΟΣ, ΘΕΟΠΑΤΡΟΥ, ΦΙΛΑΔΕΛΦΟΥ, ΕΠΙΦΑΝΟΥΣ, ΕΥΕΡΓΕΤΟΥ, ΑΥΤΟΚΡΑΤΟΡΟΣ, ΦΙΛΕΛΛΗΝΟΣ ΦΙΛΟΠΑΤΟΡΟΣ, ΝΙΚΑΤΟΡΟΣ, ΔΙΚΑΙΟΥ, ΕΥΠΑΤΟΡΟΣ ΝΕΙΚΗΣΑΣ, ΤΙΟΣ ΚΕΚΛΟΥΤΜΕΝΟΣ.]

KAIANIAN DYNASTY.

Kai-kobád (*kai* signifies the mighty).
Kai-Káús, son or grandson. Rustam his general.
Kai-Khusrú, grandson. Cyrus the great.
Lohrásp, son of Orond Sháh. (Cambyses omitted?)
Gushtásp, his son. Hystaspes of Grecian history.
Isfendíár, his son. Apanda or Astyages of ditto.
Kai Bahman, or Ardeshír darázdast. Artaxerxes Longimanus.
Homái, daughter and wife of ditto.
Dáráb, son of ditto.
Dárá, his son: the Darius overcome by Alexander the Great.

(The Mulúk-tawáif, or petty kings, following Alexander, called by the Persians the Ashkanians and Ashghanians, have been given above as the Arsacidæ of the Greeks.—J.P.)

## TABLE LXI.—*Kings of Persia, of the Sassanian race.*

[The subject of the dates of the accessions of the Sassanian dynasty is involved in some obscurity, from the practice prevailing of reckoning by the years of each king's reign instead of following the order of a single cycle.[1] I have contented myself for the present with quoting the dates given in Dr. Smith's Dictionary, and appending Dr. Mordtmann's latest determinations *à propos* to his elaborate coin illustration of the history of the race.]

| Smith. A.D. | Mordtmann. A.D. | | |
|---|---|---|---|
| 226 | 226 | 1 | Ardeshír-Bábegán bin Sásán, or Artaxerxes.[2] |
| 240 | 238 | 2 | Shahpúhr, Shapúr, or Sapor, captured Valerian. |
| 273 | 269 | 3 | Hormuzd or Hormisdas. |
| 274 | 271 | 4 | Baharám, or Varanes I. |
| 277 | 274 | 5 | Baharám, or Varanes II. |
| 294 | 291 | 6 | Baharám, or Varanes III. Segán Sháh. |
| 294 | 291 | 7 | Narsê or Narses, conquered Armenia and Galerius. |
| 303 | 300 | 8 | Hormuzd, or Hormisdas II. |
| 310 | 308 | 9 | Shahpúhr, or Sapor II. |
| 381 | 380 | 10 | Ardeshír, or Artaxerxes II. |
| 385 | 383 | 11 | Shahpúhr, or Sapor III. |
| 390 | 389 | 12 | Baharám, or Varanes IV. Kermán Sháh. |
| 404 | 399 | 13 | Yezdegird, or Isdegerde I.[3] |
| 420 | 420 | 14 | Baharám-gaur, or Varanes V. visited India. |

[1] ['Ḥamzah Iṣfahání,' Latin Preface,' p. vi.]

[2] From Moses of Chorene:—

| A.D. | | Years. |
|---|---|---|
| 232 | Artasires.....reigned | 53 |
| 285 | Sapores I. ..... | 31 |
| | Nerses..... | 9 |
| 344 | Hormisdas ..... | 3 |
| | (contemporary of Constantine). | |
| | Isdigerdes ..... | |
| | (7th year of Constantine). | |
| 351 | Sapores II..... | 70 |
| 421 | Artasires II. .....reigned | 4 |
| 425 | Veramus I. Cermanus ..... | 10 |
| 435 | Isdigerdes I. ..... | 11 |
| 446 | Veramus II. ..... | 21 |
| 467 | Isdigerdes II..... | |
| | Feroses II. in whose reign Moses of Chorene lived.—J.P. | |

[3] [Some authors insert a second king of this name after Yezdegird I.—'Ḥamzah Iṣfahání,' p. 14. Mordtmann, p. 64; but there seems to be no sufficient authority for the interpolation.]

| Smith. A.D. | Mordtmann. A.D. | | |
|---|---|---|---|
| 448 | 440 | 15 | Yezdegird, or Isdegerde II. |
| 458 | 457 | 16 | Hormuzd, or Hormisdas III. |
| 458 | 458 | 17 | Fírúz, or Perose, allied with Khákán of Huns. |
| 484 | 485 | 18 | Balás, Palash, or Balasces. |
| 488 | 491 | 19 | Kobád, or Cavades. |
| 498 | 498 | 20 | Jamasp. (Kobád recovers kingdom 502.] |
| 531 | 531 | 21 | Khosrú, Kesrí (Nushírván), or Chosroes. |
| 579 | 579 | 22 | Hormuzd, or Hormisdas IV. deposed by his general (Varanes VI. A.D. 590, M. A.D. 591.) |
| 591 | 591 | 23 | Khosrú-Parvíz, Kesrí, or Chosroes II. put to death by |
| 628 | 628 | 24 | Kobád Shírúyieh, or Siroes. |
| | 629 | 25 | Ardeshír III. Anarchy. |
| | 629 | 26 | Shahriár or Sarbazas. |
| | 629 | 27 | Púrán-Dukht. |
| | 631 | 28 | Azermi-Dukht. |
| | 631 | 29 | Ferokh-zád-Bakhtyar. |
| | [1] 632 | 30 | Yezdegird or Isdegerde III. overthrown by Musalmáns 641. |

TABLE LXII.—*Khalifs, vicegerents or successors of Mahomed or Muhammad bin Abd-allah, whose death occurred in the* 11*th of Hijra era, or* A.D. 632.[3]

(This and the following from Marsden's 'Numismata Orientala,' corrected up from later Numismatic works.)

| A.H. | A.D. | | |
|---|---|---|---|
| 11 | 632 | 1 | Abúbakr. |
| 13 | 634 | 2 | U'mar. |
| 23 | 644 | 3 | U'smán. |
| 35 | 656 | 4 | A'lí. |
| 40 | 661 | 5 | Ḥasan bin A'lí, retired to Medina—Ḥusain killed at Kerbela |
| | | | RACE OF OMMIAH, REIGNING AT DAMASCUS. |
| 41 | 661-2 | 1 | Mua'wíah I. |
| 60 | 679-80 | 2 | Yazíd bin Mua'wíah. |
| 64 | 683-4 | 3 | Mua'wíáh II. bin Yazíd. |
| 64 | 684 | 4 | A'bdallah bin Zubeir. |

[1] [632 A.D. is the date of the commencement of this king's reign, which has given the initial year to the era bearing his name. See p. 142, vol. ii. *ante*, Ockley's 'Hist. Saracens,' pp. 145, 277.]

[2] [I have altered the original transliteration of these names in order to reduce the orthography of the Roman equivalents to as close an adherence to the literal definition of the original Kufic as the nature of our English system of writing will permit. The nine letters of the Arabic alphabet, whose powers have been perverted in the utterance of foreigners, have been made to follow the Persian system of phonetic expression, and are severally represented by the following English pointed or accented equivalents:—

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| ث | ح | ذ | ص | ض | ط | ظ | ع | ق |
| s̤ | ḥ | ḍ | ṣ | ẓ | ṭ | z̤ | a', u', etc. | ḳ |

The Arabic powers of these letters are severally—1. *th* (*th*ick); 2. *h*; 3. *th* (*th*is); 4. *s*; 5. *d*; 6. *t*; 7. *th* (fa*th*er); 8. *a*; 9. *k* (guttural). I have not concerned myself greatly with the correction of the equivalents of the Arabic short vowels, but it may be noted that, under the old system, the English vowel *e* ordinarily stood for what modern practice represents by the short *a*, though in many cases it was inserted indifferently in the place of the *i*.]

| A.H. | A.D. | | |
|---|---|---|---|
| 64 | 684 | 5 | Marwán bin Ḥakim. |
| 65 | 684-5 | 6 | A'bd-ul-malik bin Marwán. |
| 86 | 705 | 7 | Walíd bin A'bd-ul-malik. |
| 96 | 714-15 | 8 | Solaimán bin A'bd-ul-malik. |
| 99 | 717-18 | 9 | U'mar bin A'bd-ul-a'ziz. |
| 101 | 719-20 | 10 | Yazíd II. bin A'bd-ul-malik. |
| 105 | 723-4 | 11 | Hishám bin A'bd-ul-malik. |
| 125 | 742-3 | 12 | Walíd II. bin Yazíd. |
| 126 | 743-4 | 13 | Yazíd III. bin Walíd. |
| 126 | 744 | 14 | Ibrahím bin Walíd. |
| 127 | 744-5 | 15 | Marwán II. bin Muḥammad, deposed and slain. |

RACE OF AL-A'BBÁS, REIGNING AT BAGHDÁD.

| | | | |
|---|---|---|---|
| 132 | 749-50 | 1 | Abúl A'bbás al-saffaḥ. |
| 136 | 753-4 | 2 | Almanṣúr. |
| 158 | 774-5 | 3 | Al-Mahdí bin al-Manṣúr. |
| 169 | 785-6 | 4 | Al-Hádí bin al-Mahdí. |
| 170 | 786-7 | 5 | Harún al-Rashíd bin al-Mahdí. |
| 193 | 809-10 | 6 | Al-amín bin al-Rashíd. |
| 198 | 213-14 | 7 | Al-Mámún bin al Rashíd. |
| 202-3 | | | Ibráhím bin Al-Mahdí, competitor, 817-18. |
| 218 | 833-4 | 8 | Al-Ma'taṣem billah bin al-Rashíd. |
| 227 | 841-2 | 9 | Al-Wáṣiḳ-billah bin al-Ma'taṣem. |
| 232 | 846-7 | 10 | Al-Mutawakkil a'l allah bin Ma'taṣem. |
| 247 | 861-2 | 11 | Al-Muntaṣir billah bin Mutawakkil. |
| 248 | 862-3 | 12 | Al-Ma'sta'in billah bin Muḥammad bin Ma'taṣem. |
| 252 | 866-7 | 13 | Al-Ma'taz billah bin Mutawakkil. |
| 255 | 868-9 | 14 | Al-Muhtadí billah bin Wáṣiḳ. |
| 256 | 869-70 | 15 | Al-Ma'tamed a'la illah bin Mutawakil; Egypt independent. Muwaffiḳ billah, his coadjutor from 871 to 891. |
| 279 | 892-3 | 16 | Al-Ma'tazed billah bin Muwaffiḳ. |
| 289 | 901-2 | 17 | Al-Muktafí billah bin Ma'tazed; provinces independent. |
| 295 | 907-8 | 18 | Al-Muḳtader billah bin Ma'tazed; murdered by a eunuch. |
| 320 | 932 | 19 | Al-Ḳáher billah bin M'atazed. |
| 322 | 933-4 | 20 | Al-Razí billah bin Muḳtader; Amír ul umrá powerful. |
| 329 | 940-1 | 21 | Al-Mutaḳí billah bin Muḳtader. |
| 333 | 944-5 | 22 | Al-Mustakfi billah bin Mutaḳí. |
| 334 | 945-6 | 23 | Al-Muti'lillah bin Muḳtader. |
| 363 | 973-4 | 24 | Al-Taí' lillah bin Muti'. |
| 381 | 991-2 | 25 | Al-Ḳádir billah bin Ishak Muḳtader. |
| 422 | 1030-1 | 26 | Al-Ḳáim beamrillah Abú Ja'far A'bd-Allah bin Ḳádir. |
| 467 | 1074-75 | 27 | Al-Muḳtadí billah Abu'l Kasem A'bdallah bin Muḥammad bin Káim beamrillah. |
| 487 | 1094-5 | 28 | Al-Mustaẓhir billah bin Muḳtadí. |
| 512 | 1118-9 | 29 | Al-Mustarshed billah bin Mustaẓhir. |
| 529 | 1134-5 | 30 | Al-Ráshid billah bin Mustarshed. |
| 530 | 1135-6 | 31 | Al Muḳtafí beamrillah bin Mustaẓhir. |
| 555 | 1160 | 32 | Al-Mustanjed billah bin Muḳtafí. |
| 566 | 1170-1 | 33 | Al-Mustaẓi beamrillah bin Mustanjed. |
| 575 | 1179-80 | 34 | Al-Násir le dín illah bin Mustanjed, professes Shíah doctrines. |
| 622 | 1225 | 35 | Al-Ẓahir beamrillah Muḥammad bin Násir. |
| 623 | 1226 | 36 | Al-Mustanṣer billah Abú Jáfar Al-Manṣúr bin Ẓáhir. |
| 640 | 1242-3 | 37 | Al-Musta'ṣem billah Abú Ahmad A'bd-Allah bin Mustanṣer. |

In the year 656 (1258), Baghdád was besieged and taken by the Moghul Chief Hulágu, grandson of Jenghiz Khán, and the Khalif Musta'ṣem put to death.

[I have introduced among Prinsep's original extracts the Tables marked **C. D. E.** which have been compiled chiefly from the work of

Ḥamzah Iṣfahání,[1] for the purpose of illustrating more fully the annals of the Eastern provinces of the empire of the Khalifs, the successional history of which may chance to throw light upon some of the obscure dynasties of the conterminous kingdoms of India, whose epochs and transitions are so peculiarly identified with the objects of these volumes.

TABLE C.—*Arab Governors of Khorásán: capitals, Merv, Nisháp'r, Bokhára.*

(A'bdallah bin Táhir adopts the second, Isma'íl bin Aḥmad the third.)

| A.H. | A.D. | | A.H. | A.D. | |
|---|---|---|---|---|---|
| 129 | 747 | Abú Muslim. | 173 | 790 | Alḥasan bin Ḳaḥṭabah. |
| 137 | 755 | Abú Dáúd Khálid bin Ibrahím. | 175 | 792 | Ghiṭríf bin A'ṭá. |
| 140 | 757 | Abú A'ṣám bin Salím. | 177 | 793 | Ḥamzah bin Málik. |
| 142 | 759 | A'bdul Jabár bin A'bdul raḥman. | 177 | 793 | Alfaẓl bin Yaḥyí bin Khálid. |
| 143 | 760 | Ḥázim bin Ḥazaimah. | 179 | 795 | A'mrú bin Ḥamal. |
| 144 | 763 | Abú A'ún A'bd ul Malik. | 179 | 796 | Manṣúr bin Yazíd bin Alkhálid Al-mahdí. |
| 149 | 766 | Abú Malik Asíd bin A'bdallah. | | | Ja'far bin Yaḥyí. |
| 150 | 768 | Ḥázim (again). | 180 | 796 | A'lí bin A'ísí bin Máhán. |
| 151 | 768 | Ḥumíd bin Ḳaḥṭabah. | 192 | 808 | Harṣama bin Aa'yan. |
| 159 | 776 | A'bdallah bin Ḥumíd. | 193 | 809 | Al Mámún (subsequently Khalif). |
| 160 | 776 | Abú A'ún. Mu'áḍ bin Muslim. | 196 | 812 | Alfaẓl bin Sahl (nominated) |
| 163 | 780 | Zahír bin Almasíb. | 203 | 818 | Rajá bin Ẓuḥak. Ghasán bin A'bád. |
| 166 | 782 | Alfaẓl bin Sulaimán. | | | |
| 170 | 787 | Ja'far bin Muḥammad. | | | |

TABLE D.—*Táherides.*

| | | | | | |
|---|---|---|---|---|---|
| 204 | 819 | Ṭáhir bin Al-Ḥusain. | 230 | 844 | Ṭáhir bin A'bdallah. |
| 207 | 822 | Ṭalḥah bin Ṭáhir. | 248 | 862 | Muḥammad bin Ṭáhir. |
| 213 | 829 | A'bdallah bin Ṭáhir. | | | |

TABLE E.—*Saffaris.*

| | | |
|---|---|---|
| 259 | 873 | Ya'kúb bin Laiṣ. |
| 265 | 878 | A'mrú bin Laiṣ, defeated by Isma'íl bin Aḥmad, the Sámání in A.H. 287, A.D. 900. |
| 287 | 900 | Ṭáhir bin Muḥammad succeeds in Sístán (Price ii. 233). |

TABLE LXIII.—*Sámánian or Sámání Dynasty of Bukhárá, Khorásan and Persia.*

| A.H. | A.D. | | |
|---|---|---|---|
| 261 | 874-5 | 1 | Naṣr bin Aḥmad, great grandson of Sámán, a robber chief, appointed governor of Bukhárá by the Khalif Ma'tamad. |
| 279 | 892 | 2 | Isma'íl bin Aḥmad. |
| 295 | 907 | 3 | Aḥmad bin Isma'íl. |
| 301 | 914 | 4 | Naṣr bin Aḥmad. |
| 331 | 943 | 5 | Núḥ bin Naṣr. |
| 343 | 954 | 6 | A'bd-ul-malik bin Núḥ. |
| 350 | 961 | 7 | Al-Manṣúr bin Núḥ. |
| 366 | 976 | 8 | Núḥ ben Al-Manṣúr. [By some authorities this accession is placed in Rajab, A.H. 365.] |
| 387 | 997 | 9 | Al-Manṣúr bin Núḥ, deposed and blinded. |
| 389 | 999 | 10 | A'bd-ul-malik bin Núḥ. [Ailek Khán enters Bukhárá on the 10th of Di'ka'dah, A.H. 389. |
| | | 11 | Isma'íl bin Núḥ, killed in the 3rd month of A.H. 395.] |

[1] حمزة بن الحسن الاصفهاني (composed in A.H. 330 = A.D. 961-2) edit. of M. Gottwaldt: Lipsiæ, 1848

TABLE LXIV.—*The Ghazní Dynasty, with the cotemporary Khalifs whose names appear on the local coinage.*

(From the 'Jour. Roy As. Soc.,' 1848.)

| Khalifs of Baghdad. | Accepted Dates of Accession. A.H. | A.H. | A.D. | Kings of Ghazní. | Notices of various Dates assigned by different Authorities. |
|---|---|---|---|---|---|
| Al Muti' lillah ... Abdicates, Dí'l Ka'dah, 363 | 334 | 350 | 961 | Alptegín ..... | Revolt 350, Rauzat al Ṣafá. |
| Al Táí' lillah..... Deposed by Bahá al dowlah (Shabán), 381 | 363 | 366 | 976 | Ishak ..... | Alptegín's death doubtful. (Abú Ishak Ibrahím, "Ibn Haukal.") |
| | | 367 | 977 | Subuktigín | |
| Al Kádir billah ... Died, Dí'l Hajah, 422 | 381 | 387 | 997 | Isma'íl ..... | Subuktigín's death, 386, Náṣiri, Jenábí; 387, Abúl Faráj; 387 (Shabán), Rauzat al Ṣafá, Abúl Fidá, Khalásat al Akhbár. |
| | | 388 | 998 | Mahmúd..... | Entitled Saif al dowlah, 384; takes possession of Ghazní, Rabí al Awal, 388; becomes independent, 389.—Various authorities. |
| | | 421 | 1030 | Muhammad .. | Mahmúd's death, Rabí al Ákhir, 421, Abúl Fidá, Khalásat al Akhbár. |
| | | 421 | 1030 | Masa'úd ..... | Muhammad's 1st reign, 7 mths., Náṣirí. Masa'úd's accession, 422, Náṣirí; 421 (3rd Shawál), Rauzat al Ṣafá, Khalásat al Akhbár. |
| Al Káím beamrillah ..... Died, 13 Shabán, 467 | 422 | 432 | 1040–1 | Muhammad .. | Rebellion against Masa'úd, 432 (Rabí al Ákhir), Abúl Fedá; Muhammad's restoration, 432, Náṣiri, Abúl Faraj; 432 (Jumád al Awal), Akbari; 433, Ḥabíb al Sair; 433 (Jumád al Awal), Guzídah. |
| | | 432 | 1041 | Módúd ..... | Muhammad's 2nd reign, 4 mths., Náṣirí. Módúd's accession, 432 (Shabán), Masa'údí, 432, Náṣirí, Abúl Faraj. Entry into Ghazní, 432 (23rd Shabán), Abúl Fidá. Accession, 434, Guzídah; 433, Khalásat al Akhbár; Ferishtah. |
| | | 440 | 1048 | Masa'úd II... | Módúd's death, 441, Náṣirí, Abúl Faraj; 441 (Rajab), Abúl Fidá, Guzídah, Rauzat al Ṣáfá, Khalásat al Akhbár, Ḥabíb al Saír. |

| Khalífs of Baghdád. | Accepted Dates of Accession. A.H. | A.H. | A.D. | Kings of Ghazní. | Notices of various Dates assigned by different Authorities. |
|---|---|---|---|---|---|
| | | 440 | 1048 | Abúl Hasan A'lí ..... *Bahá al dowlah* | Masa'úd II. and Abúl Hasan A'li, length of reign, jointly, 2 months, Náṣirí. Masa'úd II., 1 month, Guzídah, Ḥabíb al Saír; 5 days, Ṭabakát Akbarí; 6 days, Ferishtah. Abúl Hasan A'lí, length of reign 2 years, Guzídah, Khalásat al Akhbár; nearly 1 year, Habíb al Saír; 1 month, Ṭabakát Akbarí. |
| | | 440 | 1048 | A'bdal Rashíd | Accession, 440, fixed from coins; 441, Náṣirí, Abúl Faraj, Abúl Fidá; 443, Guzídah, Khalásat al Akhbár. |
| | | 444 | 1052 | Toghral ..... | 444, Abúl Fidá. |
| | | 444 | 1052 | Ferokhzád ... | Length of Toghral's rule, 40 days, Náṣirí, Khalásat al Akhbár, etc. Ferokhzád's accession, 443, Dí'l Kadah, Náṣirí. |
| | | 451 | 1059 | Ibrahím ..... | Accession, 451, Tárikh Masa'údí, Náṣirí, Abúl Fidá, Jenábi; 450, Guzídah, etc. |
| Al Muktadí beamillah ..... Died, 15 Muharrim, 487 | 467 | | | | |
| Al Mustaẓhar billah Died, 16 Rabí al Ákhir, 512 | 487 | 492 | 1099 | Masa'úd III.. | Ibrahím's death, 492, coins, Náṣirí, Guzídah, Abúl Maḥásan; 481, Abúl Fidá, Rauẓat al Safá. |
| | | 508 | 1114 | Shírzád ..... *Kamál al dowlah* | Guzídah, Jenábí, etc. |
| | | 509 | 1115 | Arslán..... | Accession, 509, Náṣirí, Guzídah, etc. |
| Al Mustarshid billah ..... Killed, 17 Dí'l Ka'dah, 529 | 512 | 512 | 1118 | Bahrám Sháh | Capture and sack of Ghazní by Á'lá al dín Jehánsóz, 547. |
| Al Ráshid billah... | 529 | | | | |
| Al Muktafí leamerillah ..... | 530 | | | | |
| Inaug., 12 Dí'l Hajah, 530 | | 547 | 1152 | Khusrú ..... | Accession, 552, Náṣirí; 544, Guzídah; 548 or 550, Abúl Fidá; 547, Akbarí. |
| Al Mustanjid billah ..... | 555 | 555 | 1160 | Khusrú Malik | Khusrú Malik finally dispossessed of Ghazní by the Ghorís, 567, Ferishtah; forced to surrender at Lahór, 585, Rauẓat al Ṣafá; 583, Akbarí; 582, Ferishtah. |

(See Table LXXII.)

## TABLE LXV.—*Sultáns of the Seljúḳ Dynasty.*

[The grandsons of Seljúḳ, a Turk of the tribe of Khazar or Ghaz on the Caspian, Toghrul-beg and Jáfer-beg Daoúd, were in the service of Mahmúd of Ghazní. In A.H. 429 (1036), the former resisted Masa'úd, and received investiture as Sultán of Khorán from the Khálif. The three branches of the Seljúḳ family settled in Hamadán, Kermán, and Rum or Anatolia.—Marsden's 'Or. Num.']

### I.—SELJÚḲ DYNASTY OF IRÁN OR PERSIA.

| A.H. | A.D. | |
|---|---|---|
| 429 | 1037 | Rukn-ud-dín Abuthaleb, Toghrel Beg, Mahmúd. |
| 455 | 1063 | Alp Arslan, Abushajia, Azz ud-din. |
| 465 | 1072 | Maleksháh, Moaz ud-dín abul fateh. |
| 485 | 1092 | Barkiarok, rokn ud-dín abulmozaffer kásim: in his reign the empire was divided, he retaining Persia; Ghiás ud-dín Muhammad, Syria and Aderbiján; and Moaz ud-dín burhán sanjiár, Khorásán and Maverulnahr. |
| 498 | 1104 | Malek Sháh, his son, deposed. |
| 498 | 1105 | Muhammad, chosen Sultan. |
| 511 | 1118 | Mahmúd, Moghiáth ud-dín Abul Ḳásem. |
| 525 | 1131 | Daáúd, his son, deposed. |
| 526 | 1131 | Masa'úd, Ghiath ud-dín, deposed. |
| 527 | 1132 | Toghrel, son of Muhammad. |
| 529 | 1134 | Masa'úd, re-established. |
| 547 | 1152 | Malek Sháh, son of Mahmúd, deposed. |
| 547 | 1152 | Mahmúd, grandson of Bograkkán, at Merv. |
| 552 | 1157 | Muhammad, his son, at Hamadán. |
| 554 | 1159 | Sulaimán Sháh, killed. |
| 555 | 1160 | Arslán Sháh, son of Toghrel, son of Muhammad. |
| 571 | 1175 | Toghrel Sháh, his son. |

### II.—SELJÚḲ DYNASTY OF KERMÁN.

| | | |
|---|---|---|
| 433 | 1041 | Kadherd, or Karut begh, installed by Toghrel begh. |
| 465 | 1072 | Sultan Sháh, his son. |
| 467 | 1074 | Turán Shah. |
| 489 | 1096 | Iran Sháh. |
| 494 | 1100 | Arslán Sháh. |
| 536 | 1141 | Moghiáth ud-dín Muhammad. |
| 551 | 1156 | Toghrel Sháh. |
| 565 | 1169 | Bahrám, Arslán, and Turán Sháh dispute succession. |
| — | —— | Muhammad Sháh, dispossessed by Malek dinar 583-1187. |

### III.—SELJÚḲ DYNASTY OF RÚM OR ANATOLIA. CAPITAL ICONIUM.

| | | |
|---|---|---|
| 470 | 1077 | Sulaimán bin Koṭlumish. |
| 478 | 1085 | Interregnum of seven years. |
| 485 | 1092 | Dáúd Kilij Arslán bin Sulaimán. |
| 501 | 1107 | Saisan bin Kilij Arslán. |
| 510 | 1116 | Masa'úd bin Kilij Arslán. |
| 551 | 1156 | A'zz-ud-dín Kilij Arslán bin Masa'úd, destroyed first crusade army. |
| 584 | 1118 | Kutb-ud-dín Malik Sháh bin Kilik Arslán, deposed. |
| 588 | 1192 | Ghiáṣ-ud-dín Kai Khusrú bin Kilij Arslán, deposed. |
| 596 ? | | Rukn-ud-dín Sulaimán bin Kilij Arslán, deposed. |
| 600 | 1203 | Kilij Arslán bin Rukn-ud-dín, deposed. |
| 600 | 1203 | Ghiaṣ ud-dín Kai Khusrú (restored). |
| 607 | 1210 | A'zz-ud-dín Kai Káus bin Kai Khusrú. |
| 616 | 1219 | A'lá-ud-dín Kai Ḳobád bin Kai Khusrú. |
| 634 | 1236 | Ghiáṣ-ud-dín Kai Khusrú bin Kai Ḳobád, invaded by the Móghul Princes, descendants of Jenghiz Khán (See Table XLIX). |
| 643 | 1245 | A'zz-ud-dín Kai Káus, in nominal conjunction with his brothers, Rukn-ud-dín and A'lá-ud-dín, sons of Kai Khusrú. |
| 655 | 1257 | Rukn-ud-dín Kilij Arslán. |
| 666 | 1267 | Ghiáṣ-ud-dín Kai Khusrú bin Rukn-ud-dín. |
| 682 | 1283 | Masaúd bin A'zz-ud-dín Kai Káus, died 708—1308. |

## TABLE LXVI.—*Atabegs of Irák, ruling Ministers under the later Princes of the Seljúkian race.*

MOSUL BRANCH.

| A.H. | A.D. | |
|---|---|---|
| 521 | 1127 | I'mád-ud-dín Zengi. |
| 540 | 1145 | Saíf-ud-dín Ghází bin Zengi. |
| 544 | 1149 | Kutb-ud-dín Maudub bin Zengi. |
| 565 | 1170 | Al-Mu'iz Saíf-ud-dín Ghází bin Módúd. |
| 576 | 1180 | A'zz-ud-dín Masa'úd bin Módúd. |
| 589 | 1193 | Núr-ud-dín (Bedr ud-dín) Arslán Sháh bin Masá'ud. |
| 607 | 1210 | Malik al-Káhir A'zz-ud-dín Mas'aud bin Núr-ud-dín. |
| 615 | 1218 | Núr-ud-dín Arslán Sháh bin Káhir. |
| 616 | 1219 | Násir-ud-dín Mahmúd bin Káhir. |
| 619 | 1222 | Al-Malik al-Raḥím Bedr-ud-dín Lúlú. |
| 657 | 1259 | Al-Malik as-Ṣálaḥ Isma'íl bin Lúlú. |

HALEB (ALEPPO) BRANCH.

| | | |
|---|---|---|
| 521 | 1127 | Imád ud-dín Zengi. |
| 540 | 1145 | Malik al-A'ádel Núr-ud-dín Mahmúd bin Zengi. |
| 569 | 1174 | A'l-Malik as-Ṣálaḥ Isma'íl bin Núr ud-dín Mahmúd. |
| 577 | 1181 | I'mád ud-dín Zengi bin Kutb ud-dín bin Módúd, delivered Haleb to Ṣálaḥ-ud-dín or Saladin. |
| 594 | 1197 | Kutb-ud-dín Muhammad bin I'mád-ud-din, at Singára. |

## TABLE LXVII.—*Turcoman Ortokite Princes, reigning in Mardin and Miafarkin, Syria.*

| | | |
|---|---|---|
| | | Il Ghází bin Ortoḳ, seized Jerusalem and Mardín. |
| 516 | 1122 | Ḥusám-ud-dín Timurtásh bin Il Ghází. |
| 547 | 1152 | Najm-ud-dín Abu'l Muẓaffar Albí bin Timurtásh. |
| 572 | 1176 | Kutb-ud-dín Il Ghází bin Albí (or Alpí). |
| 580 | 1184 | Ḥusám-ud-dín Yúluḳ Arslán bin Kutb-ud-dín. |
| 597? | | Malik-ul-Manṣúr Násir-ud-dín Ortoḳ Arslán bin Kutb-ud-dín. |
| 637 | 1239 | Malik us-Sa'íd Najm-ud-dín Ghází bin Násir-ud-dín Ortoḳ. |
| 653 | 1255 | Malik ul-Muẓaffar Ḳará Arslán bin Najm-ud-dín. |
| 691 | 1291 | Shams-ud-dín Dáúd. |
| 693 | 1293 | Malik ul-Manṣúr Najm-ud-dín Ghází. |
| 712 | 1312 | Albí Malik al-A'ádil I'mád-ud-dín A'lí. |
| 712 | 1312 | Malík as-Ṣáleḥ Shams-ud-dín Ṣálaḥ. |

ORTOKITES REIGNING AT ÁMÍD AND KHEIFA.

| | | |
|---|---|---|
| 490 | 1097 | Sokmán bin Ortoḳ. |
| 498 | 1104 | Ibráhím bin Sokmán. |
| 522? | 1128 | Rukn ud-dín Dáúd. |
| 544? | | Fakhr ud-dín Ḳará Arslán bin Dáúd. |
| 562 | 1166 | Núr ud-dín Muhammad bin Ḳará Arslán. |
| 581 | 1185 | Kutb-ud-dín Sokman bin Muhammad. |
| 597 | 1200 | Malik as-Ṣálaḥ Násir ud-dín Mahmúd. |
| 618 | 1221 | Malik al-Masá'úd bin Malik as-Ṣálaḥ Mahmúd. |
| 629 | 1231 | Malik al-Kámil, nephew of Ṣálaḥ ud-dín (Saladin), took Ámíd. |

## TABLE LXVIII.—*The Mogol or Moghul empire of Tartary. Capital Karakurm.*

| A.D. | |
|---|---|
| 1206 | Jengíz Khán, or Timugin declared emperor, on the Onon river. |
| 1227 | Túli Khán, his son, regent during interregnum. |
| 1241 | Oktai Khán, fourth son of Jengíz, elected by his father's will. Tourakina Khatun, his wife, regent for four years. |
| 1246 | Gaiuk Khán, son of Oktai. |

| A.D. | |
|---|---|
| 1248 | Ogoulganmish, his wife, regent on his death.* |
| 1251 | Mangu Khán, died in 1259. |

The empire of the Moghuls was subsequently divided into different branches in China, Persia, in Kapchak, etc.

| | |
|---|---|
| 1260 | Kublai Khán, succeeded in China, and founded the Yuen dynasty. |
| 1240 | Zagatai Khán, son of Jengíz, founded Zagatai branch in Transoxiana. |
| 1226 | Tushi Khán, another son, founded Kapchak dynasty. |

*(For these dynasties of the Tartars, and those of the Huns, Chinese, etc., see De Guignes' 'Histoire des Huns."—J. P.)

## TABLE XLIX.—*Moghul-Tartar or Íl-Khánian Dynasty of Persia.*

On the death of Mangú Khán, son of Jengíz Khán, the sovereignty of Persia was assumed by his brother,

| A.H. | A.D. | |
|---|---|---|
| 657 | 1259 | Húlágú or Húláḳú Íl-Khán. |
| 663 | 1264 | Abágá, or Abáḳá Íl-Khán, his son. |
| 681 | 1282 | Nikudár Oglan, seventh son of Húláḳú, on conversion to Muhammadanism, took the name of Aḥmad Khán.* |
| 683 | 1284 | Arghún Káán, son of Abáḳá. |
| 690 | 1291 | Kai-Khatú Káán, ditto. |
| 694 | 1294 | Baidú Káán, son of Targhíh, fifth son of Húláḳú. |
| 694 | 1294 | Gházán Káán Mahmúd, eldest son of Arghún. |
| 703 | 1303 | Ghiás-ud-dín Au-gaptú, Khudabandah Muhammad. |
| 716 | 1316 | Abú Sa'íd Bahádur Khán, his son, on whose death in |
| 736 | 1335 | The dynasty became dependent. |
| 747 | 1346 | Anúshírván. Invasion of Taimúr, or Tamerlane. (See below, LXX). |

## TABLE LXX.—*Moghul Sultáns of Khorásán.*

| | | |
|---|---|---|
| 795 | 1393 | Kutb-ud-dín Amír Tímúr Gúrgán Ṣáḥibḳirán (Tamerlane) conquered Baghdád, invaded India, etc. |
| 807 | 1404 | Khalíl Sultán, son of Mírán Sháh, deposed. |
| — | —— | Sháh Rukh, Behádur Sultán. |
| 850 | 1447 | Ulugh Beg, Malik us Sa'íd, of Khiva. |
| 853 | 1449 | A'bdul Latíf Mírzá, his son. |
| 854 | 1450 | Bábar Mírzá, Sultán Abul Ḳasam. |
| 861 | 1456 | Mírza Sháh Mahmúd deposed. |
| 861 | 1456 | Abú Sa'íd, son of Aḥmad. (See Moghuls of India.) |
| — | —— | Jiadighiar, grandson of Sháh Rukh. |
| 805 | 1470 | Sultán Hosain Mírzá, grandson of U'mar. |
| 901 | 1505 | Badí' ezzamán, his son, took refuge with the Ṣufís. |

## TABLE LXXI.—*Kings of Persia of the Sophi, Súfi, or Ṣafi Race.*

Juneid, a descendant of Ṣafí ud-dín, a Sophi or mystic philosopher, being expelled from Aderbijân by the Turkoman ruler Jehán Sháh, established himself in Shirwán. His grandson

| | | |
|---|---|---|
| 905 | 1499 | Isma'íl al-Ṣúfí bin Shaikh Haidar, united conquered provinces and assumed sovereignty of Persia and Khorásán, 908–1502. |
| 932 | 1525 | Sháh Ṭahmásp bin Isma'íl. |
| 983 | 1575 | Sháh Isma'íl II. bin Ṭahmásp. |
| 985 | 1577 | Muhammad Khudábandah bin Ṭahmásp. |
| 994 | 1585 | Ḥámzah bin Muhammad, or Amír Hams. |
| 994 | 1585 | Sháh Isma'íl bin Muhammad. |
| 994 | 1585 | Sháh A'bbás bin Muhammad. |
| 1039 | 1629 | Sháh Ṣafí bin Ṣafí Mírzá bin A'bbás. |

| A.H. | A.D. | |
|---|---|---|
| 1052 | 1642 | Sháh A'bbás II. bin Sháh Ṣafí. |
| 1077 | 1666 | Solaimán bin Sháh A'bbás. |
| 1106 | 1694 | Sháh Husain bin Solaimán, last of the Ṣafís. |
| | | Sháh Ṭahmásp II. bin Sháh Husain, abdicated. |
| 1135 | 1722 | Mahmúd, an Afghán, invaded Persia, and usurped. |
| 1137 | 1725 | Ashraf, an Afghán, defeated by Nádir Ḳulí. |
| 1242 | 1730 | Sháh Ṭahmásp, nominally restored, murdered 1737. |
| 1145 | 1732 | A'bbás III. bin Ṭahmásp. |
| 1148 | 1736 | Nádir Sháh, or Nádir Sultán, proclaimed king. |
| 1160 | 1747 | A'ádil Sháh, nephew and murderer of Nádir. |
| 1161 | 1748 | Ibráhím, his brother. |
| 1163 | 1749 | Sháh Rukh, blinded, driven to Khurásán. |
| 1163 | 1750 | Solaimán, or Mírzá Saíd Muhammad. |
| 1163 | 1750 | Ism'aíl bin Saíd Muṣṭafá, under regency of A'lí Merdan. |
| 1173 | 1759 | Muhammad Kerím Khán Zendi, held power under title of Wakíl. |
| 1193 | 1779 | Zeki Khán, usurped on his death, murdered by |
| 1193 | 1779 | Abú'l Fatḥ Khán, son of Kerím, blinded. |
| 1193 | 1779 | Ṣádik Khán, brother of ditto. |
| | | A'lí Murád Khán assumed the title of Wakíl. |
| 1199 | 1785 | Ja'far Khán, son of Ṣadik, murdered. |
| 1203 | 1789 | Lutf A'lí, his son, defeated by |
| 1209 | 1794 | Agha Muhammad Khán Ḳájár, an eunuch. |
| 1211 | 1797 | Fatḥ A'lí Sháh Ḳájár, died 1834. |

## TABLE LXXII.—*List of the Patán, Afghán, or Ghorí Sultans of Hindústán. Capital, Dihlí.*

(Corrected up from the coins of the 'Pathán Kings of Dihlí,' by the Editor.)

| | | | |
|---|---|---|---|
| 589 | 1193[1] | 1 | Mu'iz-ud-dín Muhammad bin Sám (587[2]) (1st Dynasty). |
| 602 | 1206 | 2 | Kutb-ud-dín Ai-beg. |
| 607 | 1210 | 3 | Arám Sháh. |
| 607 | 1211 | 4 | Shams-ud-dín Altumsh. |
| 633 | 1236 | 5 | Rukn-ud-dín Fíroz Sháh. |
| 634 | 1236 | 6 | Sultán Rizíah. |
| 637 | 1240 | 7 | Mu'iz-ud-dín Bahrám Sháh. |
| 639 | 1242 | 8 | A'lá-ud-dín Masa'úd Sháh (11). |
| 643 | 1246 | 9 | Náṣir-ud-dín Mahmúd (12). |
| 664 | 1266 | 10 | Ghiáṣ-ud-dín Balban (5). |
| 686 | | 11 | Mu'iz-ud-dín Kaikubád. |
| 689 | 1290 | 12 | Jalál-ud-dín Fíroz Sháh, Khiljí[3] (2nd dynasty). |
| 695 | 1296 | 13 | Rukn-ud-dín Ibráhím (9). |
| 695 | 1296 | 14 | A'lá-ud-dín Muhammad Sháh (12). |
| 715 | 1316 | 15 | Shaháb-ud-dín U'mar (10). |
| 716 | 1316 | 16 | Kutb-ud-dín Mubárak Sháh (1). |
| 720* | | 17 | Náṣir-ud-dín Khusrú. |
| 720* | | 18 | Ghiáṣ-ud-dín Tughlak Sháh (3rd dynasty). |
| 725 | 1325 | 19 | Muhammad bin Tughlak (3). |
| 752 | 1351 | 20 | Fíroz Sháh bin Salar Rajab (1). |
| 790 | 1388 | 21 | Tughlak Sháh II. |
| 791 | 1389 | 22 | Abúbakr Sháh II. |
| 793* | | 23 | Muhammad Sháh bin Fíroz Sháh. |

[1] The dates of accession, as converted into the years of the Christian era, are calculated from the months in each Hijra year in which the several monarchs are determined by Sa'íd Aḥmad to have succeeded to the throne. The small figures in brackets indicate the months of each accession. The dates marked with a star are derived from coins, and do not coincide with our native author's historical deductions.

[2] See vol. i. p. 326.

[3] Zíá Barani says 688 A.H.

| A.H. | A.D. | | |
|---|---|---|---|
| 795* | | 24 | Sikandar Sháh. |
| 795* | | 25 | Mahmúd Sháh bin Muhammad Sháh (Tímúr, 800). |
| 797 | | 26 | Nuṣrat Sháh Interregnum (coins dated 797, 798, 800, 801 and 807), Mahmúd restored, 802. |
| 816 | 1413 | 27 | Daulat Khán Lodí (1). |
| 817 | 1414 | 28 | Khizr Khán Sa'íd (4th dynasty) (3). |
| 824 | 1421 | 29 | Mubárak Sháh II. (5), coins extant with the date of 838 A.H. |
| 837 | 1434 | 30 | Muhammad Sháh bin Farid Sháh (7). |
| 849 | | 31 | A'álam Sháh (?) |
| 855 | 1451 | 32 | Bahlól Lódí (5th dynasty) (3). |
| 894 | | 33 | Sikandar bin Bahlól (?) |
| 923 | 1517 | 34 | Ibráhím bin Sikandar (Bábar, 932 A.H.) (11). |
| 937 | 1531 | 35 | Muhammad Humáyún, Mughul (5). See Table LXXX. |
| 946* | | 36 | Farid-ud-dín Shír Sháh, Afghán (?) |
| 952 | 1545 | 37 | Islám Sháh (3). |
| 960 | 1553 | 38 | Muhammad A'ádil Sháh (5). |
| 962 | 1555 | 39 | Ibráhím Súr (5). |
| 962 | 1555 | 40 | Sikandar Sháh (Humáyún, 962 A.H.) |

## TABLE LXXIII.—*Patan or Afghán Sultáns and Governors of Bengal. (Púrbí dynasty.) Capital Laknautí, or Gaur.* (MARSDEN.[1])

| | | |
|---|---|---|
| 600 | 1203 | Muhammad Bakhtiár Khiljí, governor of Berár under Kutb ud-dín. |
| 602 | 1205 | Muhammad Sherán A'zz ed-dín. |
| 605 | 1208 | A'lí Mardán A'lá ed-dín. |
| 609 | 1212 | Ḥasám ed-dín Ghiás ed-dín. |
| 624 | 1226–27 | Násir ed-dín bin Shams ed-dín. |
| 627 | 1229 | Mahmúd bin Shams ed-dín, became Sultán of Hindústán. |
| 634 | 1237 | Toghan Khán, governor under Sultán Riziah. |
| 641 | 1243 | Tiji, or Taji. |
| 642 | 1244 | Tímúr Khán Kerán. |
| 644 | 1246 | Saif ed-dín. |
| 651 | 1253 | Ikbtiár ed-dín Malik Yúzbeg. |
| 656 | 1257 | Jalál ed-dín Kháni. |
| 657 | 1258 | Táj ed-dín Arslán. |
| 659 | 1260 | Muhammad Tátar Khan. |
| 676 | 1277 | Muiz ed-dín Tughral. |
| 681 | 1282 | Nasir ed-dín Baghra (by Dow written Kera), considered first sovereign of Bengal by some. |
| 725 | 1325 | Kadr Khán, viceroy of Muhammad Sháh. |
| 741 | 1340 | Fakhr ed-dín Sekandar assumes independence. |
| 743 | 1342 | A'lá ed-dín Mubárik. |
| 744 | 1343 | Shams ed-dín Muhammad Sháh Ilías Bangarah. |
| 760 | 1358 | Sikandar Sháh bin Shams ed-dín. |
| 769 | 1367 | Ghiás ed-dín Aa'zm Sháh bin Sekandar Sháh. |
| 775 | 1373 | Saif ed-dín Sultán as-Sulátín bin Ghiás ed-dín. |
| 785 | 1383 | Shams ed-dín bin Sulátín as-Sulátín. |
| 787 | 1385 | Kansa or Khansa, a Hindú. |
| 794 | 1392 | Jalál ed-dín Muhammad Sháh (Chitmul bin Khansa). |
| 812 | 1409 | Ahmad Sháh bin Jalál ed-dín.[2] |
| 830 | 1426–7 | Násir Sháh (descendant of Shams ed-dín Ilías Bangarah). |
| 862 | 1457 | Bárbak Sháh bin Násir Sháh. |
| 879 | 1474 | Yúsaf Sháh bin Bárbak Shah. |

[1] [See also Ayín-i-Akbarí, vol. ii., p. 16.]

[2] Marsden remarks in a note: 'The coins show that the historical dates about this period are erroneous; but the means of correcting the mistakes are not sufficiently ample.' P. 562 'Numismata Orientala.'

| A.H. | A.D. | |
|---|---|---|
| 887 | 1482 | Sikandár Sháh. |
| 887 | 1482 | Fath Sháh. |
| 896 | 1490–1 | Sháh-zádah, a eunuch. |
| 897 | 1491 | Fíroz Sháh Habshí. |
| 899 | 1494 | Mahmúd Sháh bin Fíroz Sháh. |
| 900 | 1495 | Muzaffar Sháh Habshí. |
| 903 | 1428 | A'lá ed-dín Husain Sháh bin Syed Ashraf. |
| 927 | 1521 | Nuṣrat Sháh bin A'lá ed-dín Husain. |
| 940 | 1534 | Mahmúd Sháh bin A'lá ed-dín Husain, defeated by |
| 944 | 1537 | Farid ed-dín Shír Sháh. |
| 945 | 1538 | Humáyún held court at Gaur, or Jenatábád. |
| 946 | 1539 | Shír Sháh again. |
| 952 | 1545 | Muhammad Khán. |
| 962 | 1555 | Khizr-Khán Bahádur Sháh bin Muhammad Khán. |
| 968 | 1560–1 | Jalál ed-dín bin Muhammad Khán. |
| 971 | 1563–4 | Solaiman Karáni, or Karzáni. |
| 981 | 1573 | Báyazíd bin Solaimán. |
| 981 | 1573 | Dáúd Khán bin Solaimán, defeated by Akbar's forces. |

## TABLE LXXIV.—*Kings of the East, or Sharki Dynasty of Jaunpur.* (FERISHTAH.)

| | | |
|---|---|---|
| 796 | 1394 | Khwájah Jahán, Subahdár of Kanauj, Audh, Kora, and Jaunpúr, assumed independence. |
| 802 | 1399 | Mubárik Sháh, his adopted son. |
| 804 | 1401 | Shams ud-dín Ibráhím Sháh Sherki. |
| 844 | 1440 | Mahmúd Sháh bin Ibráhím. |
| 862 | 1457 | Muhammad Sháh. |
| 862 | 1457 | Husain Sháh bin Mahmúd bin Ibráhím Sháh. |
| 881 | 1476 | ——— took refuge in the Court of 'Alá ud-dín of Bengal, where he died in 905, A.H. |

## TABLE LXXV.—*Musalmán Kings of Kashmír.* (FERISHTAH.)

| | | |
|---|---|---|
| 727 | 1326 | Shams ud-dín, Sháh Mír, minister of Senadeva. |
| 750 | 1349 | Jamshíd, expelled by his youngest brother. |
| 752 | 1351 | A'lí Shír, A'lá ud-dín; a severe famine. |
| 765 | 1363 | Shaháb ud-dín; Siamuk invades Sind. |
| 785 | 1386 | Kutb ud-dín; defeats Rája of Lokhot. |
| 799 | 1396 | Sikandar, Butshikan; subverts Hindú religion. |
| 819 | 1416 | Amir Khán, A'lí Sháh; civil wars; expelled by |
| 826 | 1422 | Zain ul Ab-ud-dín, Shádí Khán, his brother. |
| 877 | 1472 | Haidar Sháh, Hají Khán. |
| 878 | 1473 | Hasan Sháh. |
| 891 | 1486 | Muhammad, a child; civil wars. |
| 902 | 1496 | Fath Sháh usurps the throne. Chakh tribe converted to Islám. |
| 911 | 1505 | Muhammad regains the throne; Ibrahím usurps. |
| 942 | 1535 | Nazúk Sháh; conquest of Emperor Humáyún, 948=1543. |
| 948 | 1541 | Mírzá Haidar Doghlat, governor under him; interregnum, and dissensions. |
| 960 | 1552 | Ibrahím II., set up by Daulat Chakk: earthquake. |
| 963 | 1555 | Ism'aíl, set up by Ghází Khán's party. |
| 964 | 1556 | Habíb, raised by Daulat Chakk. |
| 971 | 1563 | Hosain Sháh Chakk: embassy from Akbar. |
| 986 | 1578 | Yúsaf Sháh Chakk, expelled by Gohar Chakk. |
| 997 | 1588 | ——— annexation of Kashmír to the Moghul Empire by Akbar. |

## TABLE LXXVI.—*Kings of Sind and Tatta.*

| A.H. | A.D. | |
|---|---|---|
| 87 | 705 | Belochistán invaded by Hijáj, governor of Basrah, and Muhammad Kásim. |

The Ansáries, the Sumeras, and the Sumanas or Jams, successively, gain the ascendancy, then a Dihlí governor.

1203? Násir ud-dín Ḳubáchah, becomes independent.

## TABLE F.

[I have compiled the following list of the Arab Governors of Sind from Beládorí,[1] collated with and improved from Sir H. M. Elliot's excellent work on the Arabs in Sind.]

| A.H. | | |
|---|---|---|
| 93 | 1 | Muḥammad bin Ḳasim. |
| | 2 | Yazíd bin Abú Kabshah (appointed by Sulaimán). |
| 96 | 3 | Ḥabíb bin Muhalab. |
| | 4 | A'mrú bin Muslim. |
| | 5 | Junid bin A'bd al raḥman (under Hishám). |
| 107 | 6 | Tamín bin Zaid. |
| | 7 | Al ḥakam bin A'úánah. |
| | 8 | A'mrú bin Muḥammad. |
| | | (Sulaimán bin Hishám—Abú Al-Khattáb)[2] |
| | | Under the A'bbásides. |
| | 9 | A'bd al raḥman bin Muslim, Al A'bdí, defeated by Manṣúr bin Jamhúr, the local Governor under the Ummaíh Khalifs. |
| | 10 | Músa bin Ka'ab, Altamímí; overpowers Manṣúr. (The Tohfat ul Kirám attributes this victory to Dáúd bin A'lí.) |
| 140 | 11 | Hishám bin A'mrú. |
| | 12 | A'mar bin Ḥafṣ, Hazármard.[3] |
| 154 | 13 | Rúḥ bin Ḥátim.[4] |
| 184 | 14 | Dáúd bin Yazíd bin Hátim. |
| | 15 | Bashir bin Dáúd (about 200 A.H. Reinaud). |
| 213[5] | 16 | Ghassán bin A'bád. |
| | | Músa bin Yaḥia, *Al Barmaki* (dies in 221 A.H.) |
| | | A'mrám bin Músa.[6] |
| 257 | | Y'akúb bin Laiṣ. |

Subsequent division of Sind into the two principalities of Multán and Al-Mansúrah.

## TABLE LXXVII.—*The Jámí Dynasty of Sumana, originally Rájputs.*

| A.H. | A.D. | |
|---|---|---|
| 737 | 1336 | Jam Afra; tributary to Tughlak Sháh. |
| 740 | 1339 | Jám Choban. |
| 754 | 1353 | Jám Baní; asserted his independence. |
| 782 | 1380 | Timaji, his brother. |
| 782 | 1380 | Jám Sálah ud-dín; converted to Muhammadanism. |
| 793 | 1391 | Jám Nizám ud-dín. |
| 796 | 1393 | Jám A'lí Shír. |

[1] ['Abú Ja'afir Ahmad bin Yahya ibn Jábir al Baládori,' ob. inter 256 and 279 A.H. Ibn Khaldun, p. 438. Reinaud 'Fragments Arabes et Persans,' inédits relatifs à l'Inde.]

[2] [Appendix to the 'Arabs in Sind:' Cape Town, 1853. Elliot quoting 'Tohfat ul Kirám.]

[3] [Transferred from Sind to Africa in A.H. 151. Reinaud, p. 213.]

[4] [A.H. 160 to 161. Reinaud.]

[5] [Gildemeister quoting Abúlfeda ii. 150.]

[6] [Killed by عمر بن عبدالعزيز الهباري 'Beládori.']

| A.H. | A.D. | |
|---|---|---|
| 812 | 1409 | Jám Giran, son of Timaji. |
| 812 | 1409 | Jám Fath Khán. |
| 827 | 1423 | Jám Tughlak; invaded Gujerát. |
| 854 | 1450 | Jám Sikandar. |
| 856 | 1452 | Jám Sangar, elected. |
| 864 | 1460 | Jám Nanda, or Nizám ud-dín; cot. of Hasan Langa. |
| 894 | 1492 | Jám Feroz; the Turkhán family become powerful, 1520. |
| 927 | 1520 | Sháh Beg Argun occupies Sind. |
| 930 | 1523 | Sháh Hosain Arghun. |
| 966 | 1554 | Mahmúd of Bhakar. |
| 982 | 1572 | Akbar annexes Sindh to the Empire. |

## TABLE LXXVIII.—*Bahmani Dynasty of Kalbarga, or Ahsunábád.*

| A.D. | |
|---|---|
| 1347 | A'lá ud-dín Hasan Sháh gango Bahmaní, servant of a brahman in Muhammad Tughlak's court, subdued all the Dakhan. |
| 1358 | Muhammad Sháh B. I. (Ghází), makes tributary Telingana and Vijyanagar. |
| 1375 | Mujáhid Sháh B., killed by his uncle. |
| 1378 | Dáúd Sháh B., assassinated by his niece. |
| 1378 | Mahmúd Sháh I., youngest son of 'Alá; patron of literature. |
| 1397 | Ghiás ud-dín; blinded and dethroned. |
| 1397 | Shams ud-dín Sháh; puppet to Lalchin, the Malik Naib or regent. |
| 1397 | Fíróz Sháh, married daughter of Vijyanagar rája, Deva Ray. |
| 1422 | Ahmad Sháh Wali (Khán Khánán); war with rájas. |
| 1435 | A'lá ud-dín Sháh II., war with Vijyanagar. |
| 1457 | Humáyún the cruel; general insurrection. |
| 1461 | Nizám Sháh; rájas of Telingana and Orissa powerful. |
| 1463 | Muhammad Sháh II.; Málwa power increasing. |
| 1482 | Mahmúd II.; loses Konkan, Bíjápúr, and Berár. |
| 1518 | Ahmád Sháh II.; under control of Amír Beríd, minister. |
| 1520 | A'lá ud-dín Sháh III.; deposed by ditto. |
| 1522 | Wali Ullah; murdered by ditto. |
| 1525 | Kallam Ullah, Bahmaní dynasty of Bídar (Ahmadábád) terminates, and is succeeded by that of Amír Beríd at Ahmadábád. |

## TABLE LXXIX—*Beríd Sháhí Dynasty of Bídar, or Ahmadábád.*

| | |
|---|---|
| 1492 | Kásim Beríd, a Túrkí or Georgian slave. |
| 1504 | Amír Beríd; held sway over nominal kings. |
| 1549 | A'lá Beríd Sháh; first who assumed royalty. |
| 1562 | Ibrahím Beríd Sháh. |
| 1569 | Kásim Beríd Sháh. |
| 1572 | Mírzá A'lí Beríd Sháh; deposed by his relative. |
| 1609 | Amír Beríd Sháh II. |

## TABLE LXXX.—*Faruki Dynasty of Kándeish. Capitals Tálnír and Búrhánpúr.*

| | |
|---|---|
| 1370 | Malik Rája Faruki, receives the jágír of Tálnír, from Fíroz. |
| 1399 | Malik Nasír or Nasír Khán Faruki, builds Búrhánpúr. |
| 1437 | Mírán A'dil Khán Faruki, expels Dakhanies from Khandeish. |
| 1441 | Mírán Mubárik Khán Faruki; peaceful reign. |
| 1457 | Mírán Ghani, or A'dil Khán Faruki I.; tributary to Gujerát. |
| 1503 | Dáúd Khán Faruki, tributary to Málwa. |
| 1510 | A'zim Humáyún, or A'dil Khán F. II.; grandson of Gujerát king. |
| 1520 | Mírán Muhammad Khán Faruki; succeeds to Gujerát throne. |
| 1535 | Mírán Mubárik Khán Faruki, brother; war with Moghuls. |
| 1566 | Mírán Muhammad Khán Faruki, attack from Dakhan. |
| 1576 | Rája A'lí Khán Faruki; acknowledges Akbar's supremacy. |
| 1596 | Bahádur Khán Faruki; defies Akbar; is imprisoned at Gwálior. |

## TABLE LXXXI.—*Kings of Málwa. Capitals Dhár, Mándo or Shádiábád.*

| A.D. | |
|---|---|
| 1387 | Sultán Dilawar Ghórí, governor, assumes title of Sháh, 1401. |
| 1405 | Sultán Hoshang Ghórí, or Alp Khán, his son, defeats Narsinha Ray. |
| 1432 | Ghazni Khán, or Sultán Muhammad Ghórí; poisoned. |
| 1435 | Mahmúd Khán, or Sultán Mahmúd Khilji. Rána of Chitor, Kumbho presents tankas coined in his own name, 1450. |
| 1469 | Sultán Ghiás ud-dín; peaceful reign. |
| 1500 | Sultán Násir ud-dín; his son, Shahab ud-dín, revolts. |
| 1512 | Sultán Mahmúd II., younger son, last of the Khiljis. |
| 1534 | Málwa incorporated with Gujerát kingdom. |
| 1568 | ——— annexed as a province of Akbar's Empire. |

## TABLE LXXXII.—*Kings of Gujerát. Capital Pattan.*

| | |
|---|---|
| 1391 | Muzaffar Sháh I.; appointed viceroy by Firoz Tughlak, A.H. 793, assumes independence in A.H. 799 = A.D. 1396. |
| 1411 | Ahmad Sháh I., grandson, builds Ahmadábád and Ahmadnagar. |
| 1443 | Muhammad Sháh, surnamed Karím, the merciful. |
| 1451 | Kutb Sháh; opposes Málwa king, and Chitor rája Kombha. |
| 1459 | Dáúd Sháh, his uncle, deposed in favor of |
| 1459 | Mahmúd Sháh I. Begarrá; two expeditions to Dakhan. |
| 1511 | Muzaffar Sháh II.; war with Rána Sanga. |
| 1526 | Sikandar Sháh, assassinated. |
| 1526 | Nasir Khán, or Mahmúd Sháh II., displaced by |
| 1526 | Bahádur Shah, invades Málwa; murdered by Portuguese. |
| 1536 | Mírán Muhammad Sháh Farukí, his nephew, of Málwa. |
| 1538 | Mahmúd Sháh, son of Latíf Khán; released from prison. |
| 1553 | Ahmad Sháh II., a spurious heir set up by minister. |
| 1561 | Muzaffar Sháh III. Habbú, a supposititious son of Mahmúd. |
| 1572 | Muzaffar Sháh submits to Akbar, and in 1583 Gujerát finally becomes a province of Akbar's empire. |

## TABLE LXXXIII.—*Kings of Multán.*

This province was first conquered by Muhammad Kásim, at the end of the first century, Hijra. It was recovered by the Hindús on the decline of the Ghazní power. After Muhammad Ghorí's subjugation, it remained tributary to Dihlí until

| A.H. | A.D. | |
|---|---|---|
| 847 | 1443 | Sheikh Yúsaf established an independent monarchy. |
| 849 | 1445 | Ray Sehra, or Kutb ud-dín Hosain Langa I.; expelled the Sheikh. |
| 908 | 1502 | Mahmúd Khán Langa; his minister, Jám Bayezid. |
| 931 | 1524 | Hosain Langa II.; overcome by Sháh Hosain Arghún. Under Humáyún, becomes a province of the empire (see below). |

## TABLE LXXXIV.—*Imád Sháhí dynasty of Berar. Capital, Ellichpur.*

| A.D. | |
|---|---|
| 1484 | Fath Ullah Imád Sháh, Bahmaní, governor of Berár, became independent. |
| 1504 | A'lá-ud-dín Imád Sháh, fixed his capital at Gával. |
| 1528? | Daria Imád Sháh, married his daughter to Hosain Nizám Sháh. |
| 1560? | Burhán Imád Sháh, deposed by his minister. |
| 1568 | Tufal Khán, whose usurpation is opposed from Ahmadnagar, and the family of Imád Sháh and Tufal extinguished. |

## TABLE LXXXV.—*Ádil Sháhí dynasty of Bíjápúr.*

| A.D. | |
|---|---|
| 1489 | Yúsaf Khán, son of Amurath II. of Anatolia; purchased for the body guard at Ahmadábád. |
| 1501 | ——————— on the defeat of Dustúr Dínár assumes independent sovereignty as Yúsaf A'ádil Sháh. |
| 1511 | Isma'íl A'ádil Sháh. Goa taken second time by Portuguese. |
| 1534 | Mullú A'ádil Shah, a profligate, deposed and blinded by |
| 1535 | Ibrahim A'ádil Sháh I. Minister Rámráj assumes throne of Vijyanagar. |
| 1557 | A'lí A'ádil Sháh; war against the Hindú rája. |
| 1579 | Ibrahim A'ádil Sháh II. Chand bíbí regent. |
| 1626 | Muhammad. |
| 1660 | A'lí A'ádil II. |

## TABLE LXXXVI.—*Nizám Shahí dynasty of Ahmadnagar.*

| | |
|---|---|
| 1490 | Aḥmed Nizám Sháh, Bheirg, son of a brahman of Vijyanagar; throws off Bahmaní yoke. |
| 1508 | Burhán Nizám Sháh; petty wars with Berár, etc. |
| 1553 | Husain Nizám Sháh I.; confederacy against Vijyanagar. |
| 1565 | Murtaza Nizám Sháh, Diwana, conquers Berar; smothered by |
| 1588 | Mírán Husain Nizám Sháh, put to death. |
| 1589 | Isma'íl Nizám Sháh, raised by Jumál Khán Mehdeví. |
| 1590 | Burhán Nizám Sháh II.; constructs Korla fort. |
| 1594 | Ibrahím Nizám Sháh, killed in battle. |
| 1594 | Aḥmad, son of Sháh Táhir, raised by chiefs; pensioned. |
| 1595 | Bahádur Nizám Sháh, proclaimed by Chand bíbí's party; imprisoned by Akbar. |
| 1598 | Murteza Nizám Sháh II.; Nizám Sháhí dominions fall under the control of |
| 1607 | Malik Amber. |

## TABLE LXXXVII.—*Kutb Sháhí Dynasty of Golconda.*

| | |
|---|---|
| 1512 | Sultán Kulí Kutb Sháh, a Túrkmán, assumed title of king. |
| 1543 | Jamshíd Kutb Sháh, leagues with the Nizám Sháhís. |
| 1550 | Ibrahím Kutb Sháh, joins league against Rámráj. |
| 1581 | Muhammad Kulí Kutb Sháh, builds Bhagnagar or Haiderábád; died 1586. |
| 1611 | Abdallah Kutb Sháh, tributary to Sháh Jahán. |
| 1672 | Abú Hasan, imprisoned at Daulatábád. |

Under Aurangzíb, the southern conquests were formed into six Ṣúbahs, viz.: 1, Kandeish; 2, Aurangábád; 3, Bídar; 4, Berár; 5, Haiderábád; and 6, Bíjápúr.

## TABLE LXXXVIII.—*Moghul Emperors of Hindustán.*

(Fourth descendant from Taimúr or Tamerlane, see Table LXX.)

| A.H. | A.D. | |
|---|---|---|
| 899 | 1494 | Bábar, Zahír ud-dín Muhammad (mounted throne 9th June). |
| 937 | 1531 | Humáyún, Naṣír ud-dín Muhammad (28th Jan.), in 946 defeated by Shír Sháh.[1] |
| 962 | 1554 | ,, , founded the Moghul dynasty of Dihlí. |
| 963 | 1556 | Akbar, Abúl fath, Jalál ud-dín Muhammad (17th Feb.) consolidated empire. |
| 1014 | 1605 | Jehángír, Abúl Muzaffar Núr ud-dín Muhammad (7th Oct.) |
| 1037 | 1628 | Sháhjahán, Shahább ud-dín Ghází (9th Feb.) |
| 1068 | 1658 | Aurangzíb A'lamgír, Abúl Muzaffar, Maḥí ud-dín (24th Feb.) |
| 1118 | 1707 | A'zím Sháh, Muhammad Shahíd (3rd March). |
| 1118 | 1707 | Behádur Sháh, Sháh A'álam, Abúl Muzaffar Kutb ud-dín (23rd Feb.) |

[1] [10th Muharrem, A.H. 947. Ferishtah.]

| A.H. | A.D. | |
|---|---|---|
| 1124 | 1713 | Jahándár Sháh, Mú'iz ud-dín (11th Jan.) |
| 1124 | 1713 | Farukhsír, Muhammad Shahíd Marhum (11th Jan.) |
| 1131 | 1719 | Rafia' ud-darjat, Shams ud-dín (18th Jan.), (Abú berkát.) |
| 1131 | 1719 | Rafia' ud-daulat, Sháhjahán Ṣání (26th April). |
| 1131 | 1719 | (Muhammad Nakosir), (May). |
| 1131 | 1719 | Muhammad Sháh, Abúl fath Násir ud-dín (28th Aug.) |
| 1132 | 1720 | (Sultán Muhammad Ibrahim), (4th Oct.) |
| 1161 | 1754 | Áhmad Sháh, Abúl Nasr (20th April). |
| 1167 | 1749 | Alemgir II., A'ziz ud-dín Muhammad (2nd June). |
| 1173 | 1759 | (Sháhjahán), (29th Nov.) |
| 1173 | 1759 | Sháh A'lám, Jalál ud-dín (Mírzá Abdallah, A'lí Gohar), (Nov.) |
| 1201 | 1786 | (Muhammad Badar bakht). |
| 1221 | 1806 | Akbar II., Abúl Nasir, Moaín ud-dín Muhammad (3rd Dec.) |

## TABLE LXXXIX.—*Nizáms of Haiderábád.*

| A.D. | |
|---|---|
| 1717 | Áṣaf Jáh, Nizám-ul-Mulk, usurped power on Aurangzíb's death. |
| 1748 | Násir Jang, assassinated. |
| 1757 | Muzaffar Jang, ditto. Salabat Jang, killed by |
| 1763 | Nizám Alí, his brother. |
| 1803 | Sikandar Jáh. English interference, 1807. |

## TABLE XC.—*Nuwábs and Kings of Oude.*

| | |
|---|---|
| —— | Sa'dat A'lí Khán of Khorasán, Nuwáb Vazír, under Muhammad Sháh. |
| —— | Ṣafdar Jang, ditto. |
| 1756 | Shuja' ud Daulah, ditto. |
| 1775 | Áṣaf ud Daulah. |
| 1797 | Spurious son, Vasír A'lí, displaced for |
| 1798 | Sa'dat A'lí, brother of Shuja', Vazír of Hindustán. |
| 1814 | Ghází ud-dín Haidar A'lí, Sháh Zamán, king. |
| 1827 | Naṣír ud-dín Haidar. |
| 1837 | Naṣír ud-Daulah—Amjad A'lí Sháh. |
| 1847 | Wajid A'lí Sháh. |

THE END.

## ADDENDA TO USEFUL TABLES.

The paper on the Gold and Silver Currencies of India (pp. 69 to 92) was compiled, set up, and privately circulated in type in the month of October, 1856. As the period that has since elapsed has proved so calamitously exceptional both as regards the internal tranquillity and external commerce of the country, it has been deemed unnecessary to recast the memorandum, or to do more than complete the details as far as possible up to the present date, by the subjoined additional returns.

Page 81.—*Value of Gold and Silver coined in the Mints of the three Presidencies for* 1855-56.

| CALCUTTA. Value in Co.'s Rs. | MADRAS. Value in Co.'s Rs. | BOMBAY. Value in Co.'s Rs. |
|---|---|---|
| Gold, 16,78,635 Silver, 3,87,62,323 | Silver, 54,52,318 | Silver, 2,55,21,952 |

Page 82.—*Imports and Exports of Treasure (Gold and Silver) in each of the Presidencies of India, for* 1854-55, 1855-56, 1856-57, *at* 2*s. the Rupee (from a Parliamentary Return dated April* 16, 1858*).*

| YEAR. | BENGAL. | | | MADRAS. | | | |
|---|---|---|---|---|---|---|---|
| | Imports. | Exports. | Net Imports. | Imports. | Exports. | Net Imp. | Net Exp. |
| | £ | £ | £ | £ | £ | £ | £ |
| 1854-55 | 645,123 | 391,566 | 253,557 | 194,221 | 521,814 | ..... | 327,593 |
| 1855-56 | 5,479,854 | 112,536 | 5,367,318 | 852,486 | 70,730 | 781,756 | ..... |
| 1856-57 | 6,428,573 | 529,425 | 5,899,048 | 1,137,488 | 78,477 | 1,059,011 | ..... |

| YEAR. | BOMBAY. | | | TOTAL. | | |
|---|---|---|---|---|---|---|
| | Imports. | Exports. | Net Imports. | Imports. | Exports. | Net Imp. |
| | £ | £ | £ | £ | £ | £ |
| 1854-55 | 1,188,913 | 353,654 | 835,259 | 2,028,258 | 1,267,034 | 761,223 |
| 1855-56 | 4,968,947 | 417,910 | 4,551,037 | 11,301,288 | 601,176 | 10,700,111 |
| 1856-57 | 6,847,637 | 645,525 | 6,202,112 | 14,413,698 | 1,253,428 | 13,160,270 |

Page 84.—*Value of Imports and Exports of Merchandise, from* 1854-55 *to* 1856-57, *from a Parliamentary Return dated April* 16, 1858. *The Return for* 1854-55 *is inserted, because that already given at Page* 84 *is only partially official.*

| MERCHANDISE IMPORTED INTO THE THREE PRESIDENCIES. | MERCHANDISE EXPORTED FROM THE THREE PRESIDENCIES. |
|---|---|
| £ | £ |
| 1854-55 .....12,742,670 | 1854-55 .....18,927,223 |
| 1855-56 .....13,947,657 | 1855-56 .....23,039,268 |
| 1856-57 .....14,194,586 | 1856-57 .....26,338,453 |

Page 86.—*Table exhibiting the Sums paid into the East India Company's Treasury in London, on account of Railways in India, up to the 31st March,* 1858.

| NAMES OF COMPANIES. | Capital sanctioned. | Total paid in. | Re-issued in England. |
|---|---|---|---|
| | £ | £ | £ |
| East Indian | 10,731,000 | 7,757,949 | 4,543,919 |
| Great Indian Peninsula | 8,333,300 | 3,356,257 | 1,868,727 |
| Madras | 4,000,000 | 2,689,800 | 1,306,983 |
| Scinde, including Indus Flotilla and Punjaub | 2,750,000 | 934,151 | 272,540 |
| Bombay, Baroda, and Central India | 1,750,000 | 723,448 | 337,841 |
| Eastern Bengal | 1,000,000 | 35,000 | ..... |
| | 28,564,300 | 15,496,605 | 8,330,010* |

*The following Statement, extracted from a Parliamentary Return, dated 13th April,* 1858, *shows the amount of Capital which it is estimated will be required for the Indian Railways sanctioned up to this time.*

| RAILWAY COMPANY. | Miles. | Estimated Outlay required to complete the several Lines sanctioned. |
|---|---|---|
| | | £ |
| East Indian | 1,400 | 12,731,000 |
| Eastern Bengal | 130 | 1,000,000 |
| Madras | 740 | 6,000,000 |
| East Indian Peninsula | 1,208 | 10,000,000 |
| Sind and Punjab | 350 | 2,500,000 |
| Bombay, Baroda, and Central India | 330 | 2,000,000 |
| | | £34,231,000 |

Page 88.—*Assay produce of Silver Bullion received into the Mints of Calcutta, Madras, and Bombay, for* 1855-56.

| | Rupees. |
|---|---|
| CALCUTTA. | |
| Assay produce of Silver received from individuals | 4,53,61,863 |
| Value of uncurrent coins received from Treasury officers | 44,98,209 |
| Silver Coinage | 3,87,62,323 |
| MADRAS. | |
| Assay produce of Silver received from individuals | 68,01,491 |
| Value of uncurrent coins received from Treasury officers | 3,70,938 |
| Silver Coinage | 54,52,318 |
| BOMBAY. | |
| Assay produce of Silver received from individuals | 2,92,45,122 |
| Value of uncurrent coins received from Treasury officers | 10,60,480 |
| Silver Coinage | 2,55,21,952 |

* Of this total the sum of £1,800,748 has been disbursed as interest on capital.

# GENERAL INDEX.

[Where asterisks (*) are inserted after the figures, the passages indicated will be found in the foot-notes.]

## A.


Abbott (Col.) i., 284, 410; (Bactrian Coins of) ii., 193*.
Abdalgases, ii., 215.
„ Sasan, ii., 216.
Abdullah bin Házim, Coin of, found at Manikyála, i., 62, 94.
Abul Fazl (notes on Akbar's coinage), U. T., 5*; (list of Akbar's mints), U. T., 23*; (notice of Linear Measures), U. T., 123*.
Abu (Mount), Ancient Inscriptions on, i., 130.
Abyssinian era, U. T., 138.
Acts of Government on Coinage, U.T., 77.
Addenda to Useful Tables (gold and silver currencies of India, exports imports, etc.), U. T., 318.
Afghánistán, Antiquities of, i., 109.
Agathocles, i., 27, 186; ii., 4; (locality of his rule), 5, 6, 7, 13, 15, 178.
Agathocles and Diodotus, i., 27.
„ „ Euthydemus, i., xvi.
Agathocleia, ii., 196.
Agni Puráṇa, Value of Wilford's Lists from, U. T., 249*.
Albirúní, i., 43 (Account of Kings of India) 268; (Kings of Kábul) 314; (Indian Writing) ii., 46*, 48*; (Indian Numerals) ii., 80; (Gupta epoch) ii., 87; (Indian Cycles) U. T., 166.
Abulfeda, i., 69.
Ajmír Princes, i., 61.
Alexander the Great, i., 24, 55.
Alexander Bala, i., 25.
Alikasunari, ii., 22.
Allahábád, Lát, i., 41, 56, 232, 233, 365.
„ Decipherment of second inscription on, by Dr. Mill, i., 232.
„ Prinsep's revised translation of ditto, i., 233.

Alphabets —
Allahábád Gupta, ii., 39, 52.
Amarávatí, etc., ii., 53.
Aramæan, ii., 167.
Arian, i., 176, 177, 180; ii., 125, 144, *et seq.*
„ general *résumé* of, ii., 128, 147.
„ geographical limits of, i., 204.
„ Comparative, table of, ii., 166.
Bactrian (see Arian).
Bengálí, ii., 39, 52.
Bhilsa, ii., 1, *et seq.*
Chaldæo-Pehlví (see Parthian).
Comparative table of Arian alphabets, ii., 166.
Devanágarí, ii., 8, 39, 52.
Gujarát Copper Plates, ii., 39, 52.
Gujarátí (modern alphabet), ii., 52.
Indian Pálí, ii., 8, 35, *et seq.*
„ Currency of, and Geographical spread of, ii., 44*.
„ Modifications of, ii., 39.
„ Type Tables of transitions of, ii., 52.
Kashmírí, ii., 52.
Kistna, ii., 52.
Kufic, ii., 166, 168.
Kuṭila, ii., 39, 52.
Lát, (see Indian Pálí).
Nerbudda, ii., 52.
Pálí, old, of the Burmese, ii., 39.
„ modern, ii., 52.
Palmyrene, ii., 167, 168.
Parthian, i., 11; ii., 163.
„ sites of, ii., 164.
Pehlví, i., 13.
„ modern alphabet of, i., 63; ii., 170.
Pehlví Sassanian, extent of the use of, ii., 163*.
„ „ spread of, ii., 164*.
„ „ the gradations of, ii., 166.
Phœnician of M. de Luynes, ii., 166.
„ Numismatic of ditto, ii., 169.

ALPHABETS, *continued*—
Punic, of M. de Luynes, ii., 167.
Punjábí, ii., 52.
Sáh Kings of Saurástra, ii. 39, 52.
Semitic, ii., 168.
Sinaitic, ii., 167.
Syriac, 5th century, A.D., ii., 169.
„ modern, ii., 169.
Telinga, ii., 52.
Tibetan, ii., 8, 39, 52.
Western Caves, ii., 38, 52,
Zend, i., 183; ii., 166.
„ full comparative alphabet of, ii., 170.
Amogha, i., 203.
Amyntas, i., 397; ii., 193.
Ancient Hindú Coins, i., 289, 299.
Ancient Indian weights for gold and silver, i, 211*.
Ancient town near Behat, discovery of, i., 73, 76.
Andhra dynasty, i., 58, 61; U. T., 241.
„ dominion, locality of, uncertain, ii., 66.
Antigonus, ii., 20, *et seq.*
Antialkides, i., 126, 188, 208*, 353; ii., 192.
Antiochus, i., 49, 348.
„ Theos, i., 25; ii., 12, *et seq.*, 29.
„ the Great, ii., 12, 25.
Antimachus Theos, ii., 183.
„ name associated with that of Diodotus, ii., 183.
Antimachus Nikephoros, i., 189; ii., 186.
Antiquities of Afghánistán, i., 109.
Anuswára, reception of the, into Arian Alphabet, i., 160; ii., 161, 162*.
Apollodotus, i., 38, 46, 48, 49, 55, 126, 188, 208*; ii., 88, 188.
„ mentioned by Arrian, i., 47.
Arab Governors of Persia, Pehlví Coins of, i., 64.
Archebius, i., 353; ii., 193.
Arian Nomenclature, ii., 170.
„ character once prevalent, ii., 50.
Armenian era, U. T., 143.
Arrian, passage from, relating to Apollodotus, i., 47.
„ passage from, relating to money, i., 223*.
Arsaces, i., 33.
„ of Bactria, ii., 217.
Arsacidæ, i., 40, 41, 50, 126; U. T., 229, 300.
Artemidorus, ii., 187.
Aryan Races, ii., 51*.
Asiatic Society of Bengal, its institution and progress, i., 5, 15.
Asiatic Society of Bengal, resolution of, on resignation of J. Prinsep, ii., 218.
Asoka, i., 40; ii., 5, 12, *et seq.*
„ identification of Piyadasi as, ii., 13, 18, 24.
„ Translation of edicts of, ii., 14.
„ Duplicate version of original passage in edicts regarding Antiochus, ii., 15.
„ Remarks on edicts of, ii., 18.
„ Prof. Wilson's revision of the triple version of edicts, ii., 16, 21.
„ Sanskrit Alphabet of, its agreement with Alphabet of Saurástran Coins, ii., 39.
Aspavarma, ii., 210.
'Ass Money,' i., 341.
Assay of bullion brought to Calcutta mint, U. T., 61.
Ava monetary system, U. T., 34.
„ silver cakes, assay of, U. T., 61.
Avdall, Mr., i., 362.
Azilisas, i., 192; ii., 211.
Azas, i., 190; ii., 205.

## B.

Babington, Dr., i., 88*.
Bactria, Coins and relics from, ii., 218.
„ Greek Princes of, Buddhist succession to, i., 40.
„ *résumé* of works referring to Kings and Coinage of, ii., 172*.
Bactrian alphabet, discovery of, i., 178, 352, 397; ii., 125.
„ „ review of, ii., 144.
Bactrian Coins, emblems on, i., 40.
„ „ figures on, i., 42.
„ „ with supposed Greek inscriptions, i., 185.
„ „ new varieties of, from Masson's drawings, i., 352.
„ „ of the Azes group, ii., 141.
„ Empire, destruction of, i., 38*.
„ Greek Coins, i,, 221.
„ Greeks, the, ii., 64.
„ and Indo-Scythic Coins, i., 45, *et seq.*, 176, 397.
„ Kings, Coins of, i., 185-194.
„ „ uncertain names of, on Coins, i., 190.
„ „ contemporary classification of, ii., 174.
„ „ M. de Bartholomæi's list of, ii., 174.
„ „ Major Cunningham's Table, ii., 175.
„ „ M. Lassen's list, ii., 176.
„ „ Schlegel's catalogue of, i., 38.

Bactrian Kings, full Coin catalogue of, ii., 178.
„ Monarchy, Epochal and Territorial distribution of, ii., 171.
„ „ Greek dynasties of, ii., 173.
„ Pehlví inscriptions on Coins, i., 184.
„ „ alphabet, i., 180.
„ transcripts of Greek names, ii., 134.
„ type, Prinsep's, i., 177.
Bactro-Pálí characters on vase found in Tope at Bímarán, i., 105.
Balhara dynasty, the, i., 86.
Barbaric Kings of Bactria, ii., 173.
Bartholomæi, M. de, i., 28; (list of Bactrian Kings), ii., 174.
Bayer, i., 50.
Bayley, Mr. E. C. (Bi-literal inscription discovered in the Kangra Hills), i., 159; (Coins of Kashmír), i., 391; (Coinage of Kings of Kangra), i., 392.
Beghrám, Masson's memoir on ancient Coins found at, i., 80.
„ notes on, i., 82.
„ memoir on, i., 344, 348.
„ Coins collected from, in years 1833-35, i., 350.
Behat, discovery of an ancient town near, i., 73, 76.
„ note on Coins with supposed Greek inscriptions found at, i., 112.
„ exhumation of a subterranean town at, i., 200.
„ group of, Coins, i., 200-209.
Benares Copper-plate inscriptions, i., 251.
Bhilsa alphabet, application of, to Buddhist group of Coins, ii., 1.
„ „ the original type of the Sanskrit, and its derivatives, ii., 8.
„ inscriptions, ancient Sanskrit numerals in, ii., 72.
Bhítári Lát, i., 240, 365.
„ „ grammatical mistakes in the inscriptions on, i., 241.
Biswa, the, U. T., 129.
Bímarán, Tope of, i., 105.
Bird, Dr. (attempt to decipher writing on steatite vase found in Tope at Bímarán), i., 106; (Sáh Coins), ii., 93.
Block-printing, application of a new method of, ii., 102.
Borrodaile, Mr., i., 432.
Boulderson, Mr. H. S. (Bareli inscription), 331.
Brass casket from Afghánistán, date of, identical with that of the Manikyála stone, i., 161.
Brass cylinder found at Jelalábád, i., 105.
British-Indian monetary system, U. T., 1.
„ „ weights and measures, U. T., 95.
Bronze Coins of Behát, ii., 2.
Brown liquid in cylinder found at Manikyála, i., 96, 153.
Buddha, image of, from Kábul, i., 136.
„ installation of statue of, i., 266.
„ religion introduced to Kashmír, i., 39.
Buddha era, U. T., 164; i., 144*; ii., 86*, 87*.
Buddhist succession to the Greek Princes of Bactria, i., 40.
„ character of Coins dug up at Behat, i., 200.
„ assimilation of, to the Indo-Scythic Coins, i., 217.
„ emblems on earliest Hindú Coins, i., 224.
„ symbols, on the 'panther' Coins of Agathocles, ii., 7.
„ Satrap Coins, ii., 223.
Buddhist genealogies, U. T., 287.
Buddhist chronology of Tibet, U. T., 289.
Budha Gupta, i., 338, 340.
'Bull and Horseman' series of Coins, i., 331.
Burmese eras, U. T., 166.
Burmese chronology, U. T., 291.
Burn, Dr. (Kaira Tamba-Patras), i., 257, 262; (Sanskrit numerals), ii., 73.
Burnes, Lieut., i., 42, 52, 90, (topes) 165, 338.
Burnouf, M. Eugène (note on Kárchá panas), i., 53; (on Sarira), i., 106; (on the change of vowel orthography between Sanskrit and Zend), i., 129, 135; (topes), 166, 168, 183, 221, 406; (early Buddhist writings), ii., 32; U. T., 240.
Burt, Capt. (Eran pillar inscriptions), i., 248; (transcript of the Iron pillar inscription at Dihlí), i., 319.
Bush, Col. T., ii., 188, 189, 211.

## C.

Calendric scales, U. T., 185.
Calliope, ii., 199.
Caldwell, Mr. (Drávidian languages), ii., 50*.
Cast Coins, i., 215.
Cautley, Col. Sir P. T. (on an ancient town discovered near Behat), i., 73, 76; (Coins dug up at Behat), i., 200.

Caves of Central India, i., 41.
„ Dr. Stevenson's inscriptions from Western, U. T., 253.
Central India, Coins of Hindú Princes of, i., 53.
Ceylon, ancient Coins of, i., 419.
„ Topes of, i., 168.
Chandra Gupta, i., 48, 49.
„ „ I., i., 378.
„ „ II., i., 383.
Characene, Coins of, i., 30.
Chinese currency, U. T., 33.
Chinese-Tibet silver money, U. T., 65.
Chinese era, U. T., 145.
'Chohan' Coins, i., 301, 330.
Christian religion in ancient times tinctured with mysteries of sun worship, i., 123.
Chronological tables (Indian), U. T., 131.
„ „ directions for using, U. T., 175.
Chronology, Indian, U. T., 148.
Coins—
Ajmír, Someswára of, i., 330.
Arab (Pehlví legends), i., 62, 151.
„ Kufic, i., 21, 151; ii., 117.
Bactrian, i., 15, 29, 45, 80, 176, 185, 352, 397; ii., 125.
„ full catalogue of, ii., 178.
„ and Indo-Scythic, new types of, i., 397.
„ of the Azes group, ii., 141.
Bamián, i., 334.
Behat, i., 82, 200.
Bilingual, Arian, and Indian Pálí, i., 203.
„ „ and Greek, i., 187, 352.
„ Indian Pálí and Greek, i., 186, 433; ii., 88.
„ miscellaneous, i., 304; ii., 108.
Bráhmanábád, ii., 119.
Buddhist, ii., 1.
„ Satrap, ii., 223.
Ceylon, i., 419.
Chohán, i., 303, 330.
Dihlí, i., 305, *et seq.*
Ghaznavi, i., 333.
Ghori, ii., 105.
Greek, i., 7, 221, 227.
„ Bactrian, i., 350.
„ „ enumeration of, i., 350.
Gupta, i., 227, 365.
„ gold Coins, full catalogue of, i., 374-377.
„ silver ditto, ii., 94.
Hindú, i., 53, 195, 209.
„ from Kanauj, i., 85.
„ first Kanauj series, i., 285.
„ of Mid Age, i., 289.
„ Muhammadan era, i., 393.
Coins, *continued*—
Hindú, imitations from the 'Ardokro type, i., 365.
„ „ second series, i., 374.
„ „ third series, i., 388.
„ descended from the Parthian type, i., 402.
Indo-Bactrian, ii., 223.
„ Muhammadan, i., 305.
„ Sassanian, i., 32, 402, 407, 410; ii., 106, 107.
„ „ classified index of varieties of, ii., 107.
Indo-Scythic, i., 41, 45, 176, 224, 351, 398.
„ „ new varieties of, i., 360.
Kanauj, i., 230, 277, 289, 395.
Kadphises, i., 127.
Kanerkos, i., 124, 126, 360.
Kangra, i., 291, 392.
Kashmír, i., 389-391.
Kufic, i., 408; ii., 108.
Mesopotamian, i., 32.
Modern British-Indian, U. T., 2, *et seq.*
„ local, varieties of, U. T., 64.
Moghul, U. T., 46.
Muhammadan, i., 18.
Parthian, i., 9, 351.
„ subordinate varieties of, ii., 164.
Persian (modern), ii., 104.
Rájput, i., 299.
Roman, i., 1, 19.
Sáh Kings of Gujarát, ii., 84.
Samanta deva, i., 304, 313.
Sassanian, i., 12, 33, 34, 40, 120, 351.
Saurásh tran, i., 334, 425; ii., 69, 84.
„ sub-varieties of, ii., 99.
„ legends on deciphered, i., 425.
Sind, Kubáchah of, i., 305.
Toramána, i., 340.
„ of Kashmír, i. 389.
Talhah bin Táhir, ii., 118.
Varáha, i., 295.
Coin catalogue, ii., 178.
„ collections, ii., 218.
Coins collected from Beghrám, 1834-35, 350.
„ found on the site of an ancient Hindú town near Behat, 73.
„ of the 'peacock' type, 339.
„ of the same type as that found by Lieut. Conolly at Kanauj, note on, 114.
„ and relics from Bactria, ii., 218.
„ with the 'Srí Hamíra,' reverse, 333.
„ Central India (copper), U. T., 38.
„ of Sháh A'lam, symbols on, U. T., 39.

Coins and inscriptions, utility of, U. T., 219.
Coinage of India, modern, U. T., 1, *et seq.*
„ „ „ duty and refinage charge, U.T., 9.
„ of Muhammadan conquerors of Persia, i., 151.
Coining, the introduction of the art of, i., 211, *et seq.*
„ independent development of, in India, i., 219, 221.
Colebrooke, Mr. H. T., i., 54; (funeral ceremonies of the Hindús), i., 155; (ancient Indian weights for gold and silver), i., 211*; (rendering of Sanskrit texts of Golden Lát at Dihlí), i., 325.
Comparative alphabets, ii., 166.
Connection of ancient Hindú coins with the Grecian or Indo-Scythic series, i., 195.
Contemporary classification of Bactrian Kings, ii., 174.
Conolly, Lieut. A., i., 19, 84, 85.
Constantinople, era of, U. T., 137.
Copper Coins of India, tables of, U. T., 62.
Copper plate grants found at Seoní, ii., 52.
„ „ at Benares, i., 251.
Court, General, i., 105; (description of Manikyála and its topes), i., 138; (note on Coins discovered by), i., 141; (topes), i., 145, 147, 165*.
Creuzer, D. F. (on the great festival of the ancient Persians), i., 123*, 133.
Csöma de Köros, i., 38, 40, 59; (Déghopes of Tibet), i., 154; (funeral ceremonies of Sákya, i., 167*.
Cunningham, Major, i., 27*, 37, 56, 95; (his claim to the title of the discoverer of certain Bactrian letters, quoted in his own words), i., 97*, 98; (decipherments of inscriptions on Manikyála Coins), i., 98-109; 135, 136, 143; (Bactrian system of numeration), i., 145*, 149; (inscriptions from Yúsufzái), i., 164; (on topes), i., 166; (Sanchí topes), i., 172*; U. T., 241*; (Behat Coins), i., 204*; (transcript of Bhitárí Lát), i., 241; (Gupta Chronology), i., 264*, 271, 272, 338, 377; (Kashmír Coins), i., 389; ii., 3; (criticisms on Wilson's attempt to reconcile the dates of the Greek Kings mentioned in Piyadasi's edicts), ii., 26*; (Bhilsa topes), ii., 44*; (speculative date of Nirvána), ii., 87*; (opinion of the date and political position of the Sáh Kings of Saurâshtra), ii., 89;
Cunningham, Major, *continued*— (his unpublished plates of Coins), ii., 144*; (copy of Kapurdigiri inscription), ii., 24*, 147*; (list of Bactrian Kings), ii., 175; (dates of Dihlí monarchs, 230 B.C.), U. T., 239; (chronology of Kashmír), U. T., 242.
Currencies of India (gold and silver), history of, U. T., 69; (forced of Muhammad bin Tughlak), U. T., 71.
Cycles, Grahaparivritti, U. T., 158.
„ Vrihaspati-Chakra, U. T., 163.
„ years numbered by, U. T., 158.

## D.

Date, conjectural, of the Manikyála tope, i., 143, 150, *et seq.*, 174.
Danduca inscription, i., 254.
Days of the week and their synonymes, U. T., 151.
Debased coinage of later Bactrian Kings, i., 191.
Déghopes, or Chaityas, i., 154.
Demetrius, i., 38, 48, 49-51, 55, 187, 348; ii., 181.
Destruction of Bactrian empire by Tatars and Scythians, i., 38.
Devánampiya, edicts of, ii., 12, 20.
Dévánampiyatissa of Ceylon, i., 170.
Dhaulí inscriptions, ii., 14.
Die-cutting, introduction of art of, into India, i., 55.
Die-struck Coins, i., 216, *et seq.*
Dihlí pillar inscription, i., 41, 56, 233, 319; ii., 13.
„ inscription under arch of Kutb mosque, i., 327.
„ ruins in old, i., 328.
„ Coins of Pathán sovereigns of, ii., 104.
Dínár, the, i., 19, 54, 246.
Diodorus, i., 50.
Diodotus, i., 26, 27; ii., 29; (Coins of), ii., 178.
„ associated with Agathocles, i., 27; ii., 178.
„ associated with Antimachus, ii., 183.
Diomedes, i., 354; ii., 190.
Dionysius, ii., 191.
Dirham, i., 19.
Doáb, Coins dug up in the, i., 117.
Drávidian languages, ii., 50.
Droysen, M., i., 28.
Duncan, Jonathan (Sarnáth tope), i., 175*.
Dynastic Lists—
A'ádil Sháhí, of Bijápúr, U. T., 316.
Adeva rájas of Tuluva, etc., U. T., 278.

Dynastic Lists, *continued*—
Aditya, U. T., 244.
Ahirs of Nepál, U. T., 269.
Amber, ránas of, U. T., 259.
Andhra, U. T., 241.
Anhulwára (Gujarát), U. T., 255.
Assam, rájas of, U. T., 273.
Arsacidan kings of Armenia, U.T., 300.
Atabegs of Irak, U. T., 308.
Bahmani, of Kulbarga, U. T., 314.
Balabhi (Saurástra), U. T., 252.
Balhára, i., 256.
Bhattis (Jesalmer), U. T., 260.
Belál rájas of Karnátá, U. T., 275.
Bengal, rájas of, U. T., 271.
Berid Sháhí, of Bidar, U. T., 314.
Bhota, U. T., 247.
Bikaner Ráj, U. T., 259.
Bráhmaputra, U. T., 273.
Buddhist, U. T., 287.
Ceylon, sovereigns of, U. T., 295.
Chandra-vansa, U. T. 239.
Chálukya, U. T., 277.
„ of the south, U. T., 278.
Chohán, U. T., 247.
„ Haravati branch of, U.T., 248.
„ Bundi branch of, U. T., 248.
„ Kotah branch of, U. T., 249.
Chola, rájas of, U. T., 279.
Faruki of Kándeish, U. T., 314.
Ganga-vansa, U. T., 267.
Ghazní, U. T., 305.
Gonerdiya, U. T., 244.
Greek, in Asia, U. T., 299.
Gujarát, kings of, U. T., 315.
Gupta, i., 245, 250, 276.
Gurha Mundala rájas, U. T., 261.
Holkar family, U. T., 286.
Imád Sháhí, of Berar, U. T., 315.
Indravansa, U. T., 273.
Jámí, of Sumana, U. T., 313.
Kainian, of Persia, U. T., 301.
Kalabhurja, U. T., 277.
Kánwa, U. T., 240.
Kashmír, rájas of, U. T., 241.
„ Musalman Kings of, U. T., 247, 312.
Kaurava, U. T., 243.
Kesari-vansa, U. T., 266.
Khorásán, governors of, U. T., 304.
Kuru, U. T., 241.
Kutb Sháhí, of Golconda, U. T., 316.
Labong and Zimmay, chiefs of, U.T., 294.
Lunar, U. T., 236.
Magadhá, kings of, U. T., 239.
Mahratti, U. T., 285.
Maisur, rájas of, U. T., 281.
Malwa, ránas of, U. T., 256.
Manípur, rájas of, U. T., 274.
„ kings of, U. T., 315.

Dynastic Lists, *continued*—
Maurya, U. T., 240.
Mewar, ránas of, U. T., 256.
Mughal, of Tartary, U. T., 308.
Mughal sultáns of Khorásán, U. T., 309.
Mughal-Tartar, of Persia, U. T., 309.
Mughal emperors of Hindustán, U. T., 316.
Muhammadan khalifs, U. T., 302.
Multán, kings of, U. T., 315.
Nága or Karkota, U. T., 245.
Náyak, U. T., 280.
Nepál, rájas of, U. T., 268.
Neverit, U. T., 269.
Nizám Sháhí of Ahmadnagar, U. T., 316.
Nizáms of Haiderábád, U. T., 317.
Oude, nuwábs and kings of, U. T., 317.
Paligar of Trichinapali, U. T., 282.
Pandu, U. T., 237, 239.
Pandyan, of Mádura, U. T., 280.
Patán sultans of Hindústán, U. T., 310.
„ „ of Bengal, U. T., 311.
Peshdádian, of Persia, U. T., 300.
Rahtor (Kanauj), U. T., 258.
„ (Márwár), U. T., 259.
Saffarís (Khorásán), U. T., 304.
Saisunága, U. T., 240.
Sámánian, of Bokhara, U. T., 304.
Sassanian Kings of Persia, U. T., 301.
Seljúk, U. T., 307.
Sharkí, of Jaunpur, U. T., 312.
Sholan, of Karnátá, U. T., 275.
Sikh, of Lahore, U. T., 286.
Simroun, rájas of, U. T., 271.
Sind and Tatta, kings of, U. T., 313.
Sind, Arab governors of, 313.
Sindhia, U. T., 286.
Solar, or Surya-vansa, U. T., 232.
Súfi, U. T., 309.
Sunaka, U. T., 240.
Sunga, U. T., 240.
Suraj-vansa rájas, U. T., 267.
Surya-vansa, U. T., 269.
Táhérides U. T., 304.
Tibet, kings of, U. T., 290.
Tsin, of China, U. T., 288.
Turcomán Ortokite princes, U. T., 308.
Utpala, U. T., 245.
Vijayanagar, rájas of, U. T., 281.
Venkatagiri, Valuguti rájas of, U. T., 282.
Yadova, U. T., 277.
Indian, according to Feríshtah, U. T., 283.

## E.

Early Bhilsa alphabet, ii., 10.
Egyptian era, U. T., 140.
Elphinstone, Hon. M., i., 175*.
Elliot, Mr. Bardoe, i., 64.
Elliot, Sir H. M., i., 331 U. T., 283, 313.
Elliot, Mr. W., U. T., 276.
Ellora, caves of, i., 41.
Epoch of Sáh Kings of Saurashtra, ii., 86.
Epochal and territorial distribution of the Bactrian monarchy, ii., 171.
Epochs, correction of, U. T., 216.
„ fixed on astronomical data, U. T., 217.
„ by grants and inscriptions, U. T., 219.
„ fixed on Coins, U. T., 221.
Eran pillar inscription, i., 248.
Eras—
Abraham, U. T., 142.
Abyssinian, U. T.. 138.
Akbar, (Iláhí), U. T., 171.
Antioch and Alexander, U. T., 137.
Armenian, U. T., 143.
Balabhi (see Valabhi).
Buddha, i., 144*; ii., 86*, 87*; U.T. 164.
Burmese, U. T., 166.
Cæsarean, U. T., 142.
Chinese, U. T., 145.
Christian, U. T., 136.
Constantinople, U. T., 137.
Death of Alexander, U. T., 142.
Dioclesian, U. T., 140.
Egyptian, U. T., 140.
Faṣlí, U. T., 168, 170.
French revolutionary, U. T., 143.
Grecian, U. T., 141.
Gupta, i., 268, *et seq.*; U. T., 167.
Jain, U. T., 165.
Jalús years, U. T., 172.
Japanese, U. T., 147.
Jewish, U. T., 138.
Julian, U. T., 140.
Kali-yug, U. T., 154.
Muhammadan, U. T., 144.
Nabonassar, U. T., 139.
Newár of Nipál, U. T., 166.
Parasuráma, U. T., 158.
Persian, of Yesdegird, U. T., 142.
Ráj-Abhishek of the Maráthas, U. T., 173.
Sáka, U. T., 154, 167.
Siva-Sinha, U. T., 158.
Soor of Maháráshtra, U. T., 171,
Spanish, U. T., 142.
Srí Harsha, i., 268; ii., 87; U. T., 167.
Tyre, U. T., 142.
Valabhí, i., 269, 276; U. T., 158, 167.
Vikramáditya (or Samvat), U.T. 157, 167.
Eras of ancient and modern times, U. T., 132, *et seq.*
„ dependent on Hindú solar year, U. T., 153.
„ dependent on luni-solar year, U. T., 157.
„ derived from the Hijra, U. T., 168.
„ used in India, tabular view of, U. T., 174.
„ of ancient and modern times, U. T., 132.
Erskine, Mr. (topes), i., 165.
Eukratides, i., 36, 38, 48, 50, 52, 126, 186; (his name and epoch nearly identical with those of Vikramáditya), i., 187; 348, 399; ii., 127, 135, 184.
Euthydemus, i., 38, 49-51, 126, 185, 348, 398; (two kings of that name), ii., 180*; (imitation of his Coins), i., 30; (name conjoined with that of Agathocles), i., xvi.
Exports and imports of bullion, U. T., 41, 81, *et seq.*, 318.

## F.

Factory weights of Bengal, U. T., 104.
Fals, i., 19.
Faslí era of the Dakhan, U. T., 170.
Fatimite dynasty (Persia), inscription on the Coins of, i., 20.
Fergusson (classification of topes), i., 166; (Dihlí, architecture at), 328.
Ferishtah, U. T., 283.
Frœhn, Prof., i., 151; ii., 117.
Freeling, Mr., i., 339, 378*, 379.
French revolutionary era, U. T., 143.
Funds of Government of India, U.T., 79*.
„ „ conversion of 5 per cents., U.T., 86*.
Funeral ceremonies of the Hindús, i., 155.
„ „ of the Buddhists, i., 167, *et seq.*

## G.

Gadhia-Ká Paisá, i., 341.
Gage, Mr. (on brown liquid in cylinders from Manikyála), i., 157.
Gandak Lât, figure on, i., 233.
Gaur branch of Pála family, i., 295.
Genealogical tables, U. T., 215.
Gerard, Mr. J. G. (topes and antiquities of Afghánistán), i., 109, 117, 136.
Ghatotkacha, i., 37.
Gildemeister Script. Arab de rebus Indicis, ii., 111*, 120*.
Girnár rock, Asoka inscription, ii., 18, 35.
„ Sáh inscription, ii., 55.

Girnár Sáh inscription, translation of, ii., 57; (observations on), ii., 60.
Gobineau, Comte A. de, his interpretation of Parthian legends, ii., 164*.
Gold casket, containing supposed relics of Sákya Buddha, i., 108.
„ coinages of the British Government in India, U. T., 72, 76*, 78*.
„ Coins of India, table of, U. T., 43, *et seq.*
„ and silver in India, note on relative value during the 16th century, U. T., 5.
„ „ currencies of, note on history of, U. T., 69.
„ „ currencies of India, U. T., 318.
Golden Láṭ at Dihlí, i., 324.
Goldingham, Mr., i., 58.
Gondophares, ii., 214.
„ note on mention of his name in connection with the mission of St. Thomas to the East, ii., 214*.
Government of India, laws regarding coinages, U. T., 72.
Grecian era, U. T., 141.
Greek Bactrian Coins, i., 350.
„ characters on Bactrian Coins, i., 17, 31, 40, 185.
„ „ on Coins found at Manikyála, i., 94.
„ „ continuance of its use in Kábul and the Punjáb, i., 126.
„ Coins in cabinet of Roy. As. Soc., i., 7.
„ dynasties of Bactrian monarchy, ii., 173.
„ inscriptions on Coins similar to those found at Behat, i., 112.
„ legends on Bactrian Coins, i., 41.
„ letters, combinations of, employed by the Parthians, i., 57.
„ Princes of Bactria (Buddhist), succession to the, i., 40.
„ Princes of Bactria, succession of, ii., 177.
„ Syro-Bactrian Coins, i., 350.
Grotefend (Coins of Bactrian Kings), ii., 181*.
Guigniaut, M. (comparison of Sassanian and Greek mythological personages), i., 132; 133*.
Gujarát copper-plate inscriptions, i., 252, 254.
„ dynasties, i., 252, *et seq.*; U. T., 252*.
Gupta alphabet, date of, i. 248.
Gupta dynasty, i., 245, 250, 276; ii., 69.
„ era, Albirúní's observations on, i., 268.
„ era, determination of the, i., 270, 276.
„ „ schemes applicable to, i., 276; U. T., 166.
„ Coins, i., 338, 365.
„ „ imitations of, i,, 389.
„ „ additions to list of, i., 386.
„ „ (gold), revised catalogue of, i., 377.
„ „ (silver), ii., 94.
„ inscriptions on Allahábád Láṭ, i., 232.
„ „ on Bhitárí Láṭ, i., 240.
„ „ gate at Sanchí, i., 245.
„ „ Eran pillar, i., 248.
„ „ Kuháon pillar, i., 250.
„ „ Srí Hastinah copper-plates, i., 251.
„ numerals, ii., 83*.
Guptas, the, i., 231 *et seq.*, 285-288; U. T., 250.
„ collateral documents connected with, i., 252, *et seq.*
„ chronology of the, i., 265*, 272.
„ genealogy of, i., 245.
Gumpach (Muhammadan dates), U. T., 213.
Gwálior, Wilford's list of Kings of, i., 294.

## H.

Hall, Prof. Fitz Edward (reading of Gupta Coin legend), ii., 95.
Hamíra (name), i., 310; (title), 332.
Hastinah Srí, i., 251.
Haug, Dr., ii., 108*.
Heliocles, i., 38, 48; ii., 136, 182, 184.
Hermæus, i., 126, 192; ii., 199.
Hindú Coins, i., 53.
„ „ (emblems on), i., 58-61.
„ „ from the ruins of Kanauj, i., 85.
„ „ connection of, with the Grecian or Indo-Scythic series, i., 195, 285.
„ „ Col. Stacy's earliest, i., 209.
„ „ earliest specimens of, i., 211.
„ „ advances in the art of fabricating, i., 213, 220.
„ „ cast, i., 215.
„ „ die-struck, i., 216, 218.
„ „ link, i., 227.
„ „ first Kanauj series, i., 285.
„ „ mediæval, i., 289.
„ „ in Col. Stacy's cabinet, i., 289.

Hindú Coins in British Museum and East India House collection, i., 291.
„ „ imitated from the 'Ardokro' type, i., 365.
„ „ second series, i., 374.
„ „ third series, i., 388.
„ „ fourth series, i., 393.
„ „ descended from the Parthian type, i., 402.
Hindú-Muhammadan Coins, i., 303.
Hindú system of coinage, U. T., 17.
Hippostratus, ii., 198.
Hodgson, Mr. (topes), i., 154, 165*; (early Buddhist writings), ii., 32.
Honigberger, Dr. M., i., 90, 105*, 110 *et seq.*; (Coin of Kadphises), i., 127.
Huen Thsang, i., 174*; (notice of Indian kingdoms), i., 264; (statue of Buddha), i., 266; (derivation of Indian Páli writing), ii., 42*; (doubts as to the true date of Sákya's death), ii., 86*.
Hunterian cabinet at Glasgow, i., *55*.

## I.

Iambulus (notice of Indian alphabets), ii., 11.
Image of Buddha from Kábul, i., 136.
Indian weights, ancient, i., *53*.
„ Páli and Arian legends on Coins dug up at Behat, i., 204.
„ alphabet, transitions of, ii., *52*.
„ Páli alphabets, *résumé* of, ii., *35*.
„ „ modifications of the primitive character, ii., 40.
„ „ development of, ii., 42.
Indian Coins, general table of, U. T., 17.
„ coinages, history of, U. T., 69.
„ chronological tables, U. T., 131, 148, *et seq.*
„ „ „ directions for using, U. T., 175.
„ luni-solar year, U. T., 154.
„ cycles, U. T., 166.
Indo-Bactrian coins, ii., 223.
„ Parthian dynasty, ii., 174.
„ Sassanian rule in the Panjáb, evidences of, i., 125.
„ „ Coins, i., 32, 407, 410; ii., 106, 107.
„ „ „ transitional modifications of, ii. 116.
Indo-Scythic Coins, i., 23, 45, 224, 351.
„ „ „ (link), i., 227.
„ „ „ new varieties of, i., 360.
Indo-Scythian Princes of Kábul, ii., 174.
„ „ and Parthian Kings, ii., 177.
Indraprastha inscription, i., 56.
Initial method of writing in India, ii., 47*.
Inscriptions—
Allahábád Lát., i., 232, 365.
Amarávatí, ii., *53*.
Arian, i., 97, 102, 104, 105, 142, 144, 159, 161, 163; ii., 15, 21, 147*.
Bactrian (see Arian).
Barelí, i., 321.
Bákerganj, U. T., 272.
Berár, ii., *53*.
Bhabaneswar, U. T., i., 267*, 268*.
Bhabra, ii., 30*.
Bhitárí Lát, i., 242, 365.
Bímarán steatite vase, i., 107.
Brass casket from Afghánistán, i., 161.
Chálukya dynasty, U. T., 278.
Chhatarpur, U. T., 264.
Dhauli (duplicate of Girnár), ii., 14.
Dihlí iron pillar, i., 319.
„ golden Lát, i., 324; ii., 13.
Eran (Buddha Gupta), i., 248.
„ (Toramána), i., 249, 340.
Fyzábád, U. T., 258.
Gáya, ii., 13.
Girnár, ii., 13, 18.
„ Bridge, ii., *55*.
Gujarát, i., 252, 254, 257, 262; U. T., 252*.
Gupta, i., 232, 250, *et seq.*
Jalandhara, U. T., 245*.
Junágarh, i., 247; ii., *55*, 69.
Kaira Tamba-Patras, i., 259.
Kangra, i., 159.
Kapurdigiri, ii., 15, 21; (transcripts of), ii., 147*.
Kistna, ii., 53*.
Kuháon pillar, i., 250.
Kumbhi, U. T., 264.
Kutb mosque at Dihlí, i., 327.
Kutb Minar at Dihlí, i., 329.
Manikyála cylinder, i., 97, 98.
„ silver disc, i., 102.
„ slab, i., 142.
Multai, U. T., 264.
Nerbudda, ii., *52*.
Orissa, U. T., 266.
Oudipur, U. T., 252.
Pálam, i., 331.
Páli, i., 159; ii., 44*.
Parthian, ii., 164.
Pehlví, Hajiábád, ii., 108*.
Persian, from Dihlí, i., 327, 329.
Piplianagar, U. T., 251*.
Sáh Kings of Saurásh tra, ii., *55*.
Sanchí, i., 245.
Seoni, ii., 52.
Shekáwati, U. T., 260.

Inscriptions, *continued*—
Srí Hastinah, i., 251.
Sassanian, i., 183; ii., 164.
Southern Mahratta country, U. T., 276.
Udayagiri, i., 41*, 246*.
Wardak brass vessel, i., 162*.
Warangal, U. T., 267.
Western caves, U. T., 253.
Yúsufzai, i., 144.
On muhrs of Mughal emperors, U. T., 46.
Iron Lát at Dihlí, i., 319.
Iron age (Kali Yuga), U. T., 235.
Irwin, Mr. E. V., i., 1.

## J.

Jain eras, U. T., 165.
Jacob, Col. (Junágarh inscription), i., 247; ii., 67.
Jalús years, U. T., 172.
Japanese era, U. T., 147.
Jaquet, M., i., 401.
Jelálábád, tope at, i., 105, 110, *et seq.*
Jewish era, U. T., 138.
Jones, Sir W., i., 5.
Junágarh, i., 247; ii., 55, 57.
Justin, i., 50.

## K.

Kábul, Indo-Scythian Princes of, ii., 174.
Kadaphes, i., 147.
Kadaphes Kozola, ii., 203.
Kadphises, i., 126, 127, 142, 193, 227; ii., 202, 213.
„ and Kanerkos group of Coins, i., 227.
Kaira Tamba-Patras, i., 257.
Kanauj, Hindú Coins from the ruins of, i., 85.
„ coinage, Indo-Scythic paternity of, i., 231.
„ Pála dynasty of, i., 395.
Kanerki, identity of, established by inscriptions on the Kanerki Coins, i., 134.
Kanerkos, Coins of, i., 124, 126, 142, 360.
Kangra, coinage of the Kings of, i., 392.
Kangra Hills, bi-literal inscription discovered by Mr. E. C. Bayley in, i., 159.
Kanishka, a Tartar or Scythic conqueror of Bactria, i., 38, 41, 144; (his date), i., 101; (name), i., 143.
Kanwa dynasty, i., 58.
Kashmír, Prof. Wilson's chronological history of, i., 39; U. T., 241.
„ Coins of the Rájas of, i., 391.
*Kâtantra Vyakarana*, ii., 75.
Kercher La Chine, ii., 169, 216.
Khoja-o-ban (an ancient city N. W. of Bukhárá), Coins from, i., 30.
Kittoe, the late Major, i., 284; ii., 14.
Kodes, i., 188, 335, 400; ii., 203.
Kozola Kadaphes, ii., 203.
Krishna, early introduction of, into the Hindú Pantheon, i., 161.
Kshatrapa, ii., 87.
Kufic characters of early Persian Muhammadan inscriptions, i., 21.
„ „ early employment of, in Tughrás, i., 408.
„ Coins, i., 151; ii., 115.
Kuháon pillar inscription, i., 250.
Kumára Gupta, i., 338, 384; ii., 96.
Kumlowa, i., 317.
Kutb mosque at Dihlí, inscription under arch of gate of, i., 327.
„ Minár at Dihlí, i., 329.
Kuṭila inscription from Bareli., i., 321.
Khuttugh Khán, Coins of, i., 37.
Kutaur Kings, i., 42, 315.

## L.

Language of Asoka edicts, ii., 31.
„ Buddhist Scriptures, ii., 33.
Lát alphabet, effects of, on other descriptions of writing, i., 208*.
„ character, i., 216.
Lassen, Prof., i., 28, 270, 400; (application of the Lát alphabet to Coins), ii., 4; (Apollodotus), ii., 88; (Græco-Bactrian and Græco-Indian Kings), ii., 176.
„ his opinions on the epoch and relative position of the Sáh Kings of Saurástra, ii., 88.
Lindsay, Mr. John, i., 10, 12.
Lindberg, M. J. C. (Palæography of Arabs), ii., 169*.
Linear measures of India, U. T., 122.
Link Coins of the ancient Hindús, i., 198.
„ „ (Indo-Scythic and Hindú), i., 227.
Longperier, M. A. de, i., 12; ii., 114*, 115*.
Lord, Dr., ii., 126.
Luni-solar year, Hindú, U. T., 154.
Luynes, M. de (Alphabet Phénicien), ii., 166.
Lysias, i., 189; ii., 191.

## M.

Macedonian and Syrian Coins, i., 24.
„ colonists, i., 55.
Mackenzie, Col., i., 2, 58, 74, 75, 129.
Mahawanso, the, i., 169, 174*.

Mahendra Gupta, i., 387.
Makrizi, i., 19*, 151.
Manikyála, Coins found at, i., 16, 30, 37, 52, 90, 120, 147, 148, 194.
,, topes at, i., 138.
,, ,, date of, i., 118, 122, 150.
,, stone, i., 141.
,, inscription, transcript of, i., 145.
,, note on the brown liquid contained in the cylinders from, i., 153.
Manichæan heresy, the, i., 124, 134.
Manu, date of, i., 222*.
,, notices of money in, i., 218*.
Marathas, Ráj-Abhishek era of, U. T., 173.
Marsden, i., 18, 151, 152; (Kanauj gold Coins), i., 230, 420; U. T., 222.
Másha, the, i., 54.
Masson, Mr. C. (memoir on Bactrian Coins), i., 80, 90, 104*, 105*, 132; (topes), i., 106, 162*, 172, 174*; (Kanerki Coins), i., 132; (second memoir on Bactrian Coins), i., 344; (third memoir), i., 348; (Bactrian Coins), i., 353; (Indo-Scythic), i., 361; 393; (Pála dynasty), i., 395; (Indo-Sassanian), i., 405; (his most accurate eye-transcript of the Kapurdigiri inscription), ii.,-147*.
Mas'údí, ii., 123.
Materials used for writing, ii., 45*.
Mauas, i., 186, 187; ii., 200.
Maurya dynasty, i., 58; ii., 69.
Measures (linear) of India, U. T., 122.
Magas, ii., 21, 29.
Menander, i., 24, 38, 46, 48, 49, 51, 55, 126, 187, 188, 208*, 399; ii., 194.
,, mentioned by Arrian, i., 47.
Mesopotamia, Coins of, i., 32.
Meyendorf, Baron, i., 48.
Mill, Rev. Dr., i., 88; (Allahábád Lát, i., 232; (Bhitárí Lát), i., 240, 242; ii., 13, 97.
Mint cities of the early Arabs, i., 64.
Mionnet, M., i., 48.
Mithra, intimate relation between the worshippers of, and the followers of the Vedas, i., 405.
Mithraic Coins of Bactria and the Punjáb, i., 136.
Mithridates, i., 41, 50, 187.
Modern native coinage, U. T., 19.
Modern Indian Coins, symbols on, U. T., 64.
,, ,, ,, catalogue of symbols on, U.T., 67.
Moghul dynasty (Persia), Coins of, i., 20.
Mohl, M. Jules, i., 6.
Mohun Lál's collection of Coins, i., 299.
Money of Lower Roman Empire superseded in Persia, i., 18.
Monograms, Greek, i., 11, 26, 55.
,, Bactrian, full list of, ii., 177.
Monolith (*i.e.* Lát) at Allahábád, i., 232.
Moor's 'Hindú Pantheon,' i., 116.
Moorcroft, Mr., i., 159.
Mordtmann, Dr., i., 12, 34, 64, 67-72; ii., 114, 115, 165*.
'Mrich-chakata,' notice of coinage in, i., 225.
Muhammadan coinage of Persia, i., 18, 151.
,, Coins of the Samanta Deva series, i., 307.
,, dates, U. T., 213.
,, era, U. T., 144.
Müller, Max (Buddhist writings), ii., 34.
Musalmán system of coinage (India), U. T., 19.

## N.

Nágarí legend on Bactrian Coins, i., 37.
,, characters on Bactrian Coins, i., 42.
,, characters on Hindú Coins found at Kanauj, i., 87.
Náno, a title of nobility; its various interpretations, i., 130.
Nepál, coinage of, U. T., 31.
Nerbudda character, ii., 52.
Newár era of Nipál, U. T., 166.
Nicias, ii., 188.
Nirwána, or emancipation of Sákya Muni, i., 39.
Norris, Mr. (discoveries of, in Arian palæography), i., 97*; (admirable transcript of Kapurdigiri inscription), ii., 147*.
Numerals—
Arian, i., 145, 163-165.
Páli, i., 247, 253, 256, 258, 262.
Sanskrit, ii., 70, *et seq.*; ii., 80.
,, *résumé* of present information on the subject of, ii., 84.
Tibetan, ii., 76.
On Coins of Sáh Kings, ii., 80.

## O.

Ockley, 'Hist. Saracens,' i., 65.
Olshausen, Dr. J., i., 13, 71; ii., 111, 114*, 164*.
Olympiads, the, U. T., 134.
Ommaney, Mr. (Multáí plates), U. T., 264.

Origin and development of early Hindú coinages, i., 217-224.
Orthagnes, ii., 217.
Ouseley, 'Medals and Gems,' ii., 114*.

P.

Pakores, ii., 217.
Pála family, i., 293.
„ or Deva dynasty of Kanauj, i., 395.
Pálam inscription, i., 331.
Pálí characters on Bactrian Coins, ii., 5.
„ language of the Asoka edicts, ii., 31.
„ alphabet, ii., 44*.
Pana, the, i., 54.
Pandu dynasty, i., 56.
Pantaleon, ii., 179.
Panjáb, Coins brought from, by Lieut. Burnes, i., 23.
Paper currency, U. T., 71, 91.
Parthians, the, i., 431.
Parthian monarchy erected by Arsaces, i., 9.
„ „ absorption of, in the Persian empire, i., 10.
„ Coins, i., 9-11, 351; U. T., 299.
„ „ decipherments of, i., 11.
Pathán monarchs of Dihlí, i., 309; U. T., 210.
'Peacock' type, Gupta Coins of the, i., 339.
Pehlví alphabet, i., 63.
„ characters, i., 13.
„ „ on Sassanian silver Coin found at Manikyála, i., 94.
„ „ on Indo-Sassanian Coins, ii., 111-116.
„ „ extensively prevailing use of, in Persia in early times, ii., 163*.
„ „ on Sassanian Coins, i., 13, 14, 34, 36.
„ Coins of Arabian Khalifs, i., 64.
Persian monarchy, limits of its Satrapies in ancient times, ii., 64.
„ era of Yezdegird, U. T., 142.
Persia, Muhammadan coinage of, i., 18.
Phœnician alphabet, ii., 166.
„ „ derivations from, ii., 167.
Philoxenes, i., 187; ii., 140, 187.
Piyadasi (Asoka), ii., 13, 18.
„ „ Prof. Wilson contests the identity of, ii., 24.
„ dates of his edicts, ii., 19.
Pliny, U. T., 241*.
Plutarch, passage from, relating to Menander, i., 49, 171.
Porter, Sir R. Ker, i., 120; ii., 114*.
Prasii, the, i., 48.
Prinsep, H. T. (memoir of his brother), i., i.; ('Historical results of recent discoveries in Afghánistán'), i., 143*; (reading of Ghazni Coin), ii., 104; (paper on Coins and relics from Bactria), ii., 218
Ptolemies of Egypt, allusion to one of, in Girnár rock inscription, ii., 18.
Punch-marked pieces of silver, the earliest Hindú Coins, i., 211.
Punic writing, ii., 167.
Puráṇas, probable date of, i., 366*; U. T., 231, 234.
„ historical value of, U. T., 234, 249.

R.

Rahtor sovereigns of Kanauj, i., 286, 292.
Railways in India, sums paid on account of, U. T., 86, 319.
Ráj Gurú, of Asam, the, i., 39.
'Rája Taranganí,' the, i., 40.
Rájput Coins, imitations from a Grecian or Indo-Scythic model, i., 299.
Ravenshaw, Mr., i., 54.
Rawlinson, Col., ii., 114*, 160*, 162*.
Regal Satraps of Saurâshtra, ii., 74.
Regulations of Indian Government regarding coinages, abstract of, U. T., 72.
Reinaud, M., i., 43, 314; ii., 48*, 80*, 81*, 169*.
Relics, worship of, i., 169.
Renan, M. E., 'Hist. Gén. des Langues Sémitiques,' ii., 145,* 169*.
Resemblance of devices on ancient Hindú and Indo-Scythic Coins dug up at Behat, i., 196.
Riccio, i., 148.
Rochette, M. Raoul, i., 90*, 148, 401; ii., 5, 6.
Roman Empire (Lower), money of, superseded in Persia, i., 18.
„ „ Coins of, i., 19.
„ Coins (Ancient) in the cabinet of Asiatic Society, i., 1.
„ Consular Coins, i., 148.
„ year, the, U. T., 133.
Ruins of Old Dihlí, i., 328.
Rupee, prices of current, U. T., 105.

S.

Sacy, M. S. de, i., 13, 120, 121; ii., 108*, 165.*
Sáh epoch, the, ii., 86.
„ inscription from Girnár, ii., 55.
„ Kings of Saurâshtra, i., 247,* 270, 334; ii., 55, *et seq.*

Sáh Kings of Saurâshtra, coinage of, ii., 85, 93.
„ „ „ List of, ii., 91.
Sákya, i., 135.
Sákya, his epoch, i., 39.
„ Sinha, 144-145*.
„ relics of, i., 108.
Salsette, inscriptions at, i., 41.
Saljúk dynasty (Persia), Coins of, i. 19.
Sámánian dynasty (Persia), Coins of, i., 19.
Samanta-Deva series of Coins, i., 304.
Samudra Gupta, i., 380.
Samvat era, erroneous equation of, U. T., 223.
Sanakánika, i., 247*.
Sanchí topes, employed simply as depositories of relics, i., 172.
„ (Bhilsa), inscription on the gate of, i., 245.
Sangráma Sinha of Mewar, i., 298.
Sanskrit, vowel orthography of, i. 129.
„ numerals, ancient, ii., 70, *et seq.*
„ in the Bhilsa inscriptions, i., 72.
Sapor II., i., 121.
Sasan, ii., 216.
Sassanidæ, i., 126, 238, 275; ii., 176; U. T., 301.
Sassanian Coins, i., 12, 33, *et seq.*; 67, 94, 96, 120, 351.
„ „ Pehlví, ii., 164.
Satrap, ii., 64.
„ numerals similar in form to original Arian letters, ii., 83.
Saulcy, M. de, i., 19*.
Saurâshtra Coins, i. 334, *et seq.*, 425; ii. 69.
„ „ imitated from the Greek, i., 335.
„ „ legends on deciphered, i., 338, 425.
„ elected sovereigns of, i., 429.
„ regal Satraps of, ii., 74.
Schlegel, Prof., i., 42; (later Bactrian Kings), i., 47, *et seq.*, 127.
Scythian characteristics of Drávidian idioms, ii., 51*.
„ language, its influence in India, ii., 50*.
Scythic characters, ii., 108, *et seq.*
Scott, Dr. (decipherments of Parthian Coins), i., 12; (on inscriptions on Mesopotamian Coins), i. 32; ii., 165*.
Seals, antique ruby, found at Shorkót, i., 36.
„ Sassanian, ii., 163*.
Seignorage, or duty, on coinage, U. T., 8.
Seleucidæ, the supremacy of, in Ariana, indicated by device on Coin of Antiochus II., i., 25.
„ dynastic lists, U. T., 299.
Seleucus, i., 48; ii., 29.
Semitic character, possible influence of, on the Pálí, ii., 49.
„ alphabets, type table of, ii., 168.
Seoní copper plate grants, ii., 52.
Sháh, first occurrence of the term on Persian Coins, i., 20.
Shorkót, Coins and antique ruby seal found at, i., 36.
Siganfu, Nestorian monument at, ii., 169.
Silver Coins of India, table of, U. T., 52.
Skanda Gupta, i., 247, 250, 338, 386; ii., 97.
Smith, Capt. E., i., 75; (Allahábád Lát), i., 232.
Solar year, Hindú, U. T., 148.
Soor era of, Mahárâshtra, U. T., 171.
Soter Megas, ii., 213.
Spalagadames, ii., 204.
Spalahores, ii., 203.
Spalirises, ii., 204, 205.
Spalyrios, ii., 205.
Spanish era, U. T., 142.
Spartianus Ælius, ii., 216*.
Spiegel, Huzwarish Grammar, ii., 108*, 112*; (readings of Pehlví Coins), ii., 112*.
Speir, Mrs., i., 109; ii., 3.
Srí Guptas Coin, ii., 94.
'Srí Hamírah' Coins, i., 332.
Srí Harsha era, ii., 87, 90.
Srí Hastinah, copper plate grants of, i., 251.
Stacy, Major, i., 84; (note on Coins), i., 112; (Hindú Coins), i., 196; (earliest Hindú Coins), i., 209; (Rájput Coins), i., 300; 339, 342; ii., 3.
Steatite vase found in tope at Bímarán, inscription on, i., 107.
Standard, monetary, under Akbar, U. T., 71.
„ „ under East India Company, U. T., 72.
Sterling, Mr. A., i., 41.
Steuart, Sir James (on Coin in Bengal), U. T., 73*.
Stevenson, Dr., i., 103; ii., 2; (relative position of Bráhmans and Buddhists in early times), ii., 45*; (ancient Sanskrit numerals), ii., 81, *et seq.*; (inscriptions in Western caves), U. T., 253.
Strabo, i., 49.
Strato, i., 208*; ii., 196.
St. Hilaire, M. Barthélmy (note on derivation of Pálí writing), ii., 43*.
St. Thomas, mission to Indian King Gondopherus, ii., 214*.
Sub-Abdagases Sasan, ii., 216.

Suhárunpúr, Bactrian Coins found at, i., 208*.
Su-Hermæus, ii., 200.
Sun, as an emblem on Persian Coins, i., 20.
„ adopted by the Hindús, after the Persians, as the representation of Divine Power, i., 124.
„ worship of, indications of, in inscriptions on Kanerki Coins, i., 134.
„ image of, on Hindú Coins, i., 142, 147.
Sunga dynasty, the, i., 58; U. T., 240.
Sutlej, Coins brought from, by Capt. Wade, i., 24.
Suvarna, the, i., 54.
Swiney, Dr., i., 45, 51, 52, 58, 61, 116.
Sykes, Col. (language of early Buddhist writings), ii., 34; (statistical tables), U. T., 80*, 84.
Symbols, etc., on modern Indian Coins, U. T., 64.

## T.

TABLES—
Ahargana Chandramana, or lunar solar periods, U. T., 186.
Ava silver cakes, assay of, U. T., 61.
Bauddha Theogony, U. T., 229.
Buddhist chronology of Tibet, U. T., 289.
Bullion imported, exported, and minted, U. T., 41, 318.
„ brought to Calcutta mint, assay of, U. T., 61.
Burmese chronology, U. T., 291.
Calendric scales, U. T., 185.
Christian ordinary solar year, U. T., 191.
Coinages of Calcutta mint from 1801-2 to 1832-3, U. T., 80, *et seq.*
Commercial weights of India and Asia, compared with avoirdupois system, U. T., 115;
Comparison of the Tolá and Man with troy weights, U. T., 98.
Comparative, of copper Coins, U. T., 62.
English and Indian assay weights, U. T., 97.
Exchange of Sikká rupee in shillings, U. T., 14.
Exchanges (England and India), U. T., 13.
„ Spain and America and India, U. T., 15.
„ India and France, U. T., 16.
TABLES, *continued*—
Exports and imports of bullion, U. T., 41, 81, *et seq.*, 318.
For mutual conversion of Bengal, Madras, and Bombay mans, U. T., 108.
For converting sers and chatáks into decimals of a man, U. T., 108.
For the mutual conversion of tolás and pounds troy, U. T., 99.
For converting new Bazar mans, etc., into avoirdupois pounds and decimals, U. T., 101.
For conversion of mans into tons, cwts., and lbs., U. T., 102.
For converting avoirdupois weights into British Indian weights, U. T., 102.
For mutual conversion of tolás and old sikká weights of Bengal, U. T., 103.
For conversion of Bengal factory weights into new standard mans and decimals, U. T., 105.
For conversion of values in current rupees into their equivalents in sikká rupees, U. T., 106.
For reducing Anás and Páis into decimal parts of a rupee, U. T., 12.
Gaz measures, U. T., 123.
Genealogical, U. T., 215.
Gold Coins of India, U. T., 43, 50.
Gold bullion, assay produce of, U. T., 11.
Gold muhrs in sovereigns and shillings, U. T., 15.
Gold and silver coined in the three Presidencies Prom 1833-34 to 1854-55, U. T., 81.
„ „ imports and exports of, from 1813-14 to 1853-54, U. T., 82; from 1854-55 to 1856-57, 318.
Hindú Theogony, U. T., 227.
„ Sidereal calendar, U. T., 189, 201.
„ „ „ directions for using, U. T., 176.
„ „ „ epochs of, U. T. 188.
„ luni-solar calendar, U. T. 187, 207.
„ „ „ directions for using, U. T., 177.
Hindús, chronological eras of, showing correspondence with European dates, U. T., 21.
Hijra, general table of, U. T. 192.

TABLES, *continued*—
Hijra and Julian and Gregorian Calendars, correspondence between, U. T., 193.
„ „ directions for using, U. T., 175.
Indian Coins, general table of, U. T., 17.
„ weights, U. T., 109.
„ „ origin of, U. T., 111.
„ planetary systems, general view of, U. T., 153.
Jovian cycle (Vrihaspati-Chatra), U. T., 163.
Linear and square measures, U. T., 127.
Muhammadan lunar years, U. T., 185.
Months, signs, etc., order and names of, in Sanskrit, Hindu, and Tamil, U. T., 150.
Paurânic genealogies, U. T. 231.
Railways in India, sums paid on account of, U. T., 86, 319.
Silver Coins of India, U. T., 52.
„ coinage in provincial mints of India, U. T., 81.
„ bullion, assay produce of, U. T., 10, 88.
Solar Ahargana, U. T., 188.
Vrihaspati-Chakra, or 60 years cycle of Jupiter, U. T., 163.
To find the first day of the week for any date from 5,000 B.C. to 2,700 A.D., U. T., 190.
Talhah bin Tahir, Coins of, ii., 118.
Tamba-Patras, Dr. Burn's, i., 262.
Telephus, ii., 198.
Theodotus I., i., 38.
„ II., i., 38.
Tibetan calendar, U. T., 160.
„ numerals, ii., 76.
Tod, Col., i., 2, 9, 41, 47-49, 55, 56, 82; (observations on Coins found at Kanauj), i., 86, *et seq.*; 116; (Parthian origin of Bactrian kingdom), i., 127*; (Hindú Coins), i., 198; (historical data—Gujarât), i., 253; (pre-requisites for understanding Indian history), ii., 67.
Topes, Manikyála, excavation of, i., 93, 171.
„ of Afghánistán, i., 109.
„ Benares, i., 175.
„ Bimarán, in Ceylon, i., 105, 169.
„ Jelalábád, i., 105.
„ Kohwat, i., 162*.
„ Sanchí, i., 171, 172.
Topes, 'Commandment,' at Dhauli, i., 166*.
„ their objects, i., 154.
„ the sites of cinerary sepulture, i., 167.
„ used to enshrine sacred relics, i., 171.
„ supplementary note on, i., 165.
„ classification of, i., 166.
„ archæology of, i., 175.
Toramána, i., 248, 249, 339.
Travels of Huen-Thsang, i., 265.
Trebeck, Mr. (on topes), i., 157.
Tregear, Mr., i., 336.
Trogus Pompeius, i., 49, 50.
Troyer, M. (on chronology of Kings of Kashmír), U. T., 242.
'Tughras' on Coins, i., 409.
Turnour, Hon. Mr. (Buddhist funeral ceremonies), i., 167, 168, 419; (identification of Piyadasi as Asoka), ii., 13.
TYPE TABLES OF ALPHABETS—
Bactrian, ii., 128.
Pehlví, i., 63; ii., 170.
Sanskrit, ii., 10.
Semitic, ii., 168.
Zend, ii., 170.
Tyre, era of, U. T., 142.
Tytler, Dr. R., cabinet of Coins, i., 2.

## U.

Udayagiri, i., 247*.
Unadpherrus, i., 126, 192; (Gondophares), ii., 214.

## V.

Vaillant, i., 362.
Valabhi or Balhára dynasty, i., 256, *et seq.*,
„ era, etc., i., 269, 276; U. T., 167.
Varáhas, Indo-Scythic tribe of the, i., 297.
Varáha temple, Toramána's inscription on, at Eran, i., 248, 340.
Varka Deva, Coin of, i., 42.
Ventura, General, collection of Coins, i., 24, 52; (Coins and relics from Manikyála), i., 90; (remarks on relics found by), i., 118, 147, 153, 154.
Vikramáditya, i., 187; U. T., 223, 249*, 250*.
„ his era, U. T., 157.
Vincent, Dr., i., 432; ii., 11.
Visarga, the, ii., 75.
Visconti, i., 48.
Vishnu-Deva, Coin of, ii., 2.
Vonones, ii., 203, 204.

## W.

Wade, Capt., coins brought from the Sutlej by, i., 24, 58; (letter from, relating to Manikyála Coins), i., 91, 92.
Wardak brass vessel, i., 104, 108.
„ „ „ inscription on, i., 162.
Wathen, Mr. (Gujarát copper plate inscriptions), i., 252; (Valabhi dynasty), i, 256.
Weber, Dr., i., 435*; (Phœnician derivation of Indian alphabet), ii., 42; (Indian method of writing, as indicated by terms employed to designate the act), ii., 46*.
Weight and Assay of modern Anglo-Indian Coins, U. T., 5.
Weights, ancient Indian, i., 211*.
„ modern Indian, general table of, U. T., 109.
„ and measures Sir H. M. Elliot's, U. T. 95.
„ and measures, British-Indian, U. T., 95.
Westergaard, M. (Junágarh inscription), i., 247; ii., 16, (Bundelesh) 108*.
Wilford, Major, i., 41, 54, 61, 123, 132; (Andhra Princes), ii., 66; U. T., 241; (value of his lists from the Agni Purana), U. T., 249*; (his speculations on Vikramáditya), U. T., 250*.
Williams' Pálí Alphabets ii., 52*.
Wilkins, Dr., i., 87.
Wilson, Prof. H. H., i., 4, 16, 27, 39-42; (ancient Indian currency), i., 53, 58, 61, 80, 105, 106, 135; (topes), i., 154, 165, 168, 173; (site of ancient city of Behat), i., 200; (development of coinage among the early Hindús), i., 221; (date of Manu), i., 222*; (notices of ancient coinages from Sanskrit authors), i., 225*; (translation of Srí Hastinah copper plates), i., 251; (Gupta epoch), i., 270; (probable date of the Puránas), i., 366*; U. T., 231, 234; (Andhra dynasty), U. T., 241; (revision of Asoka's edicts), ii., 15, *et seq.*; (contests the identity of Piyadasi with Asoka), ii., 24; (language of the Asoka edicts), ii., 31; comparative antiquity of the use of Sanskrit and Pálí), ii., 33; (revised translation of Sáh inscription on Girnár rock), ii., 67; (Sáh Kings of Gujarát), ii., 87; U. T., 222; (Varma Inscription, U. T., 245.
Wilson, Rev. Dr. (facsimiles of rock inscriptions at Junágarh), ii., 13; (account of Junágarh), ii., 56.
Works on Bactrian numismatics, ii., 172*.
Writing, methods of, ii., 45.
„ varieties current in India in the eleventh century, ii., 48*.

## Y.

Yona (or Yavana) Rája, ii., 15, 18, 60, 61.

## Z.

Zend, i., 183; ii., 166.
„ alphabet, ii., 170.
„ vowel orthography of, i., 129.
Zeionisas, ii., 210.
Zodiac, signs of, introduced as emblems on Persian Coins, i., 20.
Zoilus, ii., 100.

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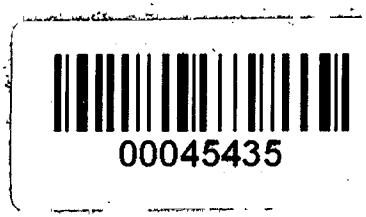
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